

TWELFTH ANNUAL REPORT
OF THE
Horticultural Societies
OF ONTARIO
FOR THE YEAR
1917

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE)

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO



TORONTO:
Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty
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Printed by
WILLIAM BRIGGS
Corner Queen and John Streets
TORONTO



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To His Honour SIR JOHN STRATHEARN HENDRIE, C.V.O., a Lieutenant-Colonel
in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I have the honour to present herewith for your consideration the Report of
the Horticultural Societies of Ontario for the year 1917.

Respectfully yours,

W. H. HEARST,

Minister of Agriculture.

TORONTO, 1918.

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ANNUAL REPORT
OF
The Horticultural Societies of Ontario
1917

To the Honourable W. H. Hearst, Premier and Minister of Agriculture:

SIR,—The year 1917 has been the banner one for the Horticultural Societies of Ontario, as is evidenced by the report of the work done by them, together with the proceedings at the twelfth annual convention. This organization has a now paid membership of upwards of 18,000, and, in addition, many new Societies have applied for incorporation. Few associations in Canada have done better work for the encouragement of home and vacant lot gardening than the one the report of which I have the honour to submit for your consideration. Hundreds of thousands of bushels of valuable garden food products have been produced through the efforts of these Societies, whose motto is "Cultivate every foot of ground so that our great alliance for freedom's cause may be maintained."

Faithfully yours,

J. LOCKIE WILSON,

Superintendent.

OFFICERS, 1918

President..... T. D. DOCKRAY, Toronto.
First Vice-President..... PROF. J. W. CROW, O.A.C., Guelph.
Second Vice-President..... WM. HARTY, Seaforth.
Secretary and Editor..... J. LOCKIE WILSON, Toronto.
Treasurer..... C. A. HESSON, St. Catharines.
Hon. Director..... DR. F. E. BENNETT, St. Thomas.

Directors: District No. 1, REV. A. H. SCOTT, Perth; 2, G. H. BAKER, Lindsay; 3, R. WHORLEY, Haileybury; 4, MISS MARY YATES, Port Credit; 5, J. A. WEBBER, Hamilton; 6, JNO. GRIEVES, Seaforth; 7, H. W. BROWN, Kitchener; 8, DR. J. A. BOTHWELL, Stratford; 9, C. D. BROWN, Walkerville.

Auditors: W. J. EVANS and W. J. GRAHAM, Toronto.

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Representative to Civic Improvement League: R. B. WHYTE, Ottawa.

Representative to School Gardens Association of America: C. B. HAMILTON, Toronto.

Representative to Canadian National Exhibition: P. H. MITCHELL, Toronto.

Committee on Names and Varieties: H. J. MOORE, Niagara Falls; F. E. BUCK, C.E.F., Ottawa; P. H. MITCHELL, Toronto; PROF. W. T. MACOUN, C.E.F., Ottawa; WM. HUNT, O.A.C., Guelph; O. J. ROBB, Vineland Sta.; WM. HERRICK, Galt; J. C. CROMBIE, St. Thomas.

TREASURER'S REPORT

FOR THE YEAR ENDING NOVEMBER 21ST, 1917.

Receipts.

Balance on hand as per statement of November 21st, 1916	\$235 33
Affiliation fees account, 1916-17	70 00
Affiliation fees account, year 1917-18	105 00
Affiliation fees, arrears	12 00
Bank interest to November 30th, 1916	2 40
Bank interest to May 31st, 1917	2 27
	\$427 00

Expenditures.

Honorarium, Secretary	\$50 00
Assistants at Convention	8 00
Caretaker of Convention Hall	5 00
Thos. Wibby, 500 "Rose design" buttons	13 00
Mr. J. H. Bennett, delegate's expenses to American Civic Association	25 00
Rev. G. W. Tebbs, delegate's expenses to American Civic Association	25 00
American Civic Association, annual fee	5 00
Legg Bros., letter paper and envelopes, new plate	35 15
Treasurer's account for postage and war stamps	3 40
Book of receipt forms	15
Discount on cheques (affiliation fees)	2 45
	\$172 15
Total expenditure	\$172 15
Balance on hand	254 85
	\$427 00

C. A. HESSON, *Treasurer.*

St. Catharines, November 21st, 1917.

Audited and found correct, }
 MARY YATES, }
 ADA, L. POTTS, } *Auditors.*

ONTARIO HORTICULTURAL ASSOCIATION

The Twelfth Annual Convention of the Ontario Horticultural Association was held in the Canadian Foresters' Hall, 22 College St., Toronto, on Wednesday and Thursday, November 21st and 22nd, 1917, with President, Dr. F. E. Bennett, in the chair. The number of delegates in attendance was largely in excess of that of previous years and great interest was shown in all the proceedings.

PRESIDENT'S ADDRESS.

DR. F. E. BENNETT, ST. THOMAS.

I assure you I deeply appreciated the honor you conferred upon me a year ago by electing me president of this most important organization. I also extend the glad hand of welcome to any who may be with us for the first time at our annual convention. I desire also to extend greetings to those older members who have for years graced our meetings with their presence, and who have contributed so much to the growth and promotion of this most worthy institution.

We meet to-day under circumstances of sadness and sorrow, for the war with all its misery, its hatred, its bloodshed and its anguish is still being waged in the centres of civilization. Hope and optimism still spring eternal in the human breast. The days are dark, but let us hope brighter days are ahead. Our honor and liberty are being defended on the battlefields of France and the bloodstained plains of Flanders by our gallant and brave sons. Canada has given of her best. Their courage, bravery, fortitude and endurance are the heritage of posterity and the legacy of the race. Many of them sleep within sound of the whistling bullets, the shrieking shrapnel, the bursting shell and the roaring cannon. Ours is the solemn honor in knowing that they died for the eternal verities by which we gain immortality and that human civilization and freedom may survive this cataclysm and be the heritage of posterity.

The beauty of nature in these disastrous days seems a kind of background against the devastation of war. Nature with her bloom and beauty seems to be making a kind of atonement for man's great sin. Though the present summer was an abnormally backward one, I have never seen our country filled with such enchanting beauty. The gold and green of the opening leaves, the magic of the trees, each clothed with such a wealth of green, every garden full of blossom and the gaiety of the wild flowers along the wayside seemed to turn our minds away from the depressing horrors of war to the beauty of nature's God. A young soldier writing from the front said: "War does not seem so terrible in the stark barrenness of winter as when the spring comes and puts on its crown of beauty. It is not hard to die in the winter, but it seems hard to die amid the bloom and blossoms of spring." Man is making the world an inferno with his war, but nature modifies it and partly obliterates it by her beauty, and it is a good thing that no sin of man can stay nature's life and beauty, no sin can stay the orderly procession of the seasons. In spite of war flowers bloom, trees burst into leaf and harvests ripen and are reaped, and it is so because flowers are the agencies used to renew life in the heart of the world and keep life sweet. It is what our boys want when they return from the war to obliterate the memory of their struggles and to renew their lives upon tender and helpful lines. By all means let them come back to a country filled with nature's beauty.

The one organization to which the work of civic beautification is entrusted is that which meets here to-day. Let us then realize the demands which will be made upon us, and live up to our opportunities for good. Our membership has reached approximately eighteen thousand, a figure which some might expect to be sufficient for much good. It must be admitted that this enables us to extend considerable influence and to do a large amount of good in our respective municipalities, yet the influence of horticulture should be made nation-wide. Every municipality should have a live, thoroughly organized horticultural society, and not until then should we consider that we are doing all that we should accomplish. From personal experience I know there are many municipalities only waiting a word of encouragement and assistance in organizing. Does a successful business man sit down and wait for business? No, he goes out in search of it by aggressive advertising. And so should we, with our immense field before us. Let us go forward with greater energy and create an environment in every part of the country which will have the greatest possible refining influence on the children of to-day who will be the men and women of to-morrow.

Apart from the refining and moral influence of horticulture we must remember its physical advantages, and if ever a strong vigorous manhood were needed in the country it is to-day. Let us then do our utmost to help those who need assistance in this work. Men thoroughly conversant in every department of the work should be sent into the field to confer with, advise and organize new societies, and to encourage and enthuse any which may have become dormant. I am not speaking as a novice. I am giving you the results of my personal observations during the past year and prior to that. I have had the pleasure of addressing many societies, of organizing several and re-organizing some which had become almost defunct. In every case those present showed a keen interest, and decided to proceed to greater activities in future.

The little village of Dutton, in Elgin County, with a population of only eight hundred people, organized provisionally some six weeks ago. To-day they have eighty members, and they have planted out fourteen public beds of tulips and other spring flowers around their schools, churches and public places. They have also started many citizens on the road to floriculture who had never previously grown anything in their lawns and yards but grass. This has been accomplished by giving each member a liberal donation of bulbs, roses or shrubs. How can the value of such a start be estimated?

Co-OPERATION.—One method by which one society can help another with practically no expense to either has been tried out in the district in which I live this year. I refer to the interchange of exhibits and speakers at shows and lectures. St. Thomas, London, Tillsonburg, Aylmer and Ingersoll all worked together as far as possible in this way to make the various shows of each a greater success than would have been possible otherwise. The St. Thomas society also made creditable exhibits, for educational purposes only and not for competition, at Toronto Exhibition and at London Fair. These we are told were much appreciated by flower lovers, and the Chairman of the Horticultural Section of the Canadian National Exhibition, Mr. Frankland, who is especially well known to you Toronto horticulturists, was delighted with the results. He asked me to have this convention consider some plan whereby a special department may be considered for such exhibits next year, and, if necessary, a whole wing of the Horticultural Building will be devoted to our purposes.

Other matters which I would be pleased to have this convention consider are



THOMAS D. DOCKRAY,
President, Ontario Horticultural Association, 1917-1918.

increased vegetable production, conservation in many different phases, such as protection of trees and bird life, utilization of fallen leaves and street sweepings, and the encouragement of sheep rearing in parks where at present there is a considerable expense for mowing and similar labor. By giving these matters our attention we can contribute materially to the welfare of our country and our men overseas. Vegetable prices continue to soar notwithstanding the extensive propaganda last spring, and the excellent results which were obtained. Also, in regard to wool, we must remember that the one per cent. of the world's man power who are in arms to-day are using sixty per cent. of the world's wool crop. The ninety-nine per cent. of us must get along on forty per cent. of it. In conclusion I say that we must never fail to remember that there are two subjects before us at all times, namely, the smoke and noise nuisance and unsightly bill boards. I trust that the Convention of 1917 will prove of the greatest value to all concerned.

W. J. EVANS: There are many features in this address that commend themselves to this Convention, among others its brevity. We appreciate an address with all the points included in Dr. Bennett's, so briefly stated. I am the representative of the Toronto Horticultural Society to the Canadian National Exhibition, and that prize list certainly needs revision. It is difficult to know how to revise it to meet all suggestions and requirements. If a small committee or even the directors of this organization would take up the list and revise it, as in their judgment is requisite, I promise that it will be laid before the committee of the exhibition association and I will certainly do my utmost to see that the result of your deliberations are accomplished. A committee of a few qualified men to revise that list could meet and probably submit their deliberations before this Convention. I move the adoption of the President's address.

Seconded by Mr. E. E. KILMER and adopted.

HOW I GROW MY GLADIOLI.

WM. HARTY, SEAFORTH.

In my opinion there is no flower that will give such great returns for the labor and money expended as the gladiolus. Its great range of color from almost black to almost pure white, its freedom from insect pests, and its great lasting qualities assure this claim. It is as a cut flower that the gladiolus is of the most value.

About October 1st I cut a number of spikes just as the second bloom opened, placed them in a vase of water, changed the water three times a week, cutting a portion of the end of the spike, and at the end of three weeks there were still some good blooms. On one spike—Pink Perfection—four flowers measured 4½ inches each.

In securing bulbs never buy cheap collections. You are sure to get a large percentage of inferior ones. Rather buy a mixture of good sound bulbs, or better still, secure named varieties. You know flower lovers are the most unselfish and generous people one meets. It gives the greatest pleasure to the grower to be able to tell the admirer of a certain variety the name, thus enabling your visitor to obtain what you so much admire yourself.

I will mention some gladioli I have grown, commencing with the earliest to bloom.

Halley. Possibly the best and cheapest yet produced; a splendid salmon pink.
Empress of India. Very rich dark brown, sometimes streaked with lighter color.

Baron Hullet. Grand dark blue, tall spike, medium sized flower.

Niagara. A fine large bloom, light yellow and a strong grower.

Glory of Holland. White, yellow shaded, good size and a sure bloomer.

Lily Lehman. A real dainty white, shaded cream.

Pink Perfection. A really grand flower, large and of a fine satiny finish.

Panama. Another splendid pink, this gladiolus created a great sensation when first introduced in Holland, bulblets selling as high as \$20 per pint.

Wm. Falconer. Fine large blush pink.

Mrs. Frances King. A splendid light red color, a strong grower.

America. A fine light pink, strong stem, very good.

Peace. One of the strongest growers; a good white flower with violet-shaded spot in the throat.

Princes. A strong grower, very large scarlet flower with white throat.

All the above are splendid stock.

HOW I GROW THEM.—Select an open space away from all beds, trees or borders. Dig a trench the desired length, 7 inches deep and about 12 inches wide. Throw the surface soil on one side; the sub-soil on the other side. Now, having obtained some good, well decomposed manure, put about 2 inches in the trench and 2 inches of surface soil, then with a hoe or a stable fork thoroughly mix the soil and the manure adding a nice sprinkling of commercial fertilizer. Place the bulbs in two rows 6 inches apart and 5 inches in the rows. Cover with about 1½ inches of fine top soil; leave about 20 inches between the trenches. Be sure to cultivate often. A garden wheel-hoe with cultivator teeth is the best. As the bulbs grow level with the soil fill up the now sunken trench until there are from 3-3½ inches of soil on top of the bulbs. Water freely and cultivate after each watering or after rain as soon as the ground will admit of it. Following these directions you are sure to succeed. This may seem a great deal of work but I assure you that it will pay in the increase in the quality and quantity of your bulbs, and in the greater size and beauty of the flowers. In the fall as soon as the frost is about to set in take up the bulbs, leaving about 4 inches of the stalk. Place the bulbs in boxes or baskets and allow them to dry for about two months. Then the old corm or bulb will easily come off. Keep dry and free from frost, for if allowed to get damp they may sprout and be injured.

JAS. OGILVIE: The first few paragraphs of my discussion of Mr. Hartry's address are taken from a paper given by Mr. Groff to a Gladiolus Society in the United States.

There is something in color and combination of color that to the sensitive and attuned perception gives rise to sensations and emotions impossible of description by word or pen. To the artist in any profession having color and color scheme for its aim or objective, the influence of new, advanced and highly refined shades or combinations of a rare character, eliminates all other interests, influences and conditions, and constitutes to the possessor a sufficiency so enthralling as to destroy for a time at least, all sense of appreciation of all sensibility for more material aspects of surrounding influences and even physical needs.

Such individual characteristics are possessed by all flower lovers in degrees. No two are attuned in exact unison, but many are happy possessors of this refined

sensibility as to enable them to receive pleasure, enjoyment and satisfaction in such volume as to make for great personal happiness in intimate association with the beautiful in nature, and also as an incentive to physical activity and effort, as to be productive of benefits impossible of acquirement in any other way. The value of high class and choice types in floriculture is, therefore, an influence to such temperaments, of value and satisfaction beyond estimate, and their relative capacity for such appreciation is the gauge of their measure of enjoyment.



Gladioli.

For the purpose of satisfying the foregoing general and happy conditions of all flower lovers, there is no generally available and diverse product of floriculture equal to the gladiolus. To support this comprehensive claim, let me remind you that there are very few plants that produce the full range of primary colors in their inflorescence. This the gladiolus does. In addition to the colors of red, white, yellow and blue, we have to-day innumerable varieties embracing every shade of these colors to say nothing of endless and marvellous combinations of quality, beauty and value, beyond the conception of the human mind.

To these are being added yearly such increased diversity and attractiveness without possible limitation, as to satisfy every individual taste and every grade of refined and cultivated appreciation.

This in brief recounts some of the many qualities of the "people's flower." Its moderate cost, simple culture, beauty of bloom, healthy foliage, immunity from attacks of insect enemies and comparative freedom from fungus diseases, increase of planting stock, and ease of storage in winter give it a surpassing claim to be considered a popular flower. You can grow them in any good garden soil except very hard clay, in which case a little sand or humus should be mixed with the clay to make it easier to work and prevent it from becoming baked hard in a dry time. They may be planted any time from the end of April until late in June. Gladioli planted by me on the 22nd of June, the day the late Queen's Jubilee was celebrated, all flowered satisfactorily.

The flower spikes should be cut as soon as the first, or at most the second, flower opens, care should be taken to leave as much foliage as possible on the stem left on the bulb, to bring it to proper maturity, and also to produce as many little bulblets as possible. These bulblets should be kept in a safe place away from frost and planted next spring as early as safe to do so, about 2 inches deep, then lift them in the fall and keep for planting the following spring. By this means in three years you will have good flowering bulbs to replace your old ones which deteriorate and go back after being grown and flowered for a number of years. The bulbs thus raised from the bulblets are just as good as the original stock. To obtain the bulblets you desire tie a string around your choice plants when they are in bloom, so that you can separate them from the others at digging time in the fall. Plant in a sunny position, never in the shade, nor where the roots of shade or fruit trees will sap the moisture from the ground.

Gladioli look nice if planted in little groups of half a dozen or more anywhere around the lawn or yard. I plant mine in beds, after spading the ground as deeply as the soil will permit, pulverize it thoroughly, furrow out the rows the whole length of the bed, a foot apart, to the depth of 5 or 6 inches, sprinkle by hand some sure growth fertilizer or sheep manure in the bottom of the furrow, then rake about an inch of soil into the furrow over the fertilizer to protect the corms from coming in direct contact with the fertilizer, which might prove too hot for the tender roots when they start into growth, but by the time they get down through the soil covering the fertilizer it has become dissolved and mixed with the soil and ready to do its work. Plant the bulbs from 4 to 6 inches apart in the rows and cover them by raking the soil taken from the furrows back again with your rake, this pulverizes the soil and leaves it loose, permitting the air to circulate freely through it. The bulbs should be covered to a depth of 4 inches in ordinary garden soil, but if your land is light sand they should be planted a little deeper as a protection against the high winds blowing them over. In such case the stems would become crooked and unfit for use in vases or decorative work. In clay land they need not be planted so deep, as the stiff clay will hold them upright. If heavy rain comes soon after planting and causes a hard crust to form on top of the ground, as it will do with some soils, it is a good plan to rake your bed over carefully before the plants come through the ground. Do not go too deep as you might break the points off the young plants. This raking breaks up the crust and makes it fine, which acts as a mulch and keeps the soil underneath from drying out and becoming hard. The moisture retained by this means in the soil will cause the young plants to come up much quicker and start into vigorous growth.

In large beds if you have plenty of land it is a good plan to leave out every fifth row for a walk, so that you can get around much easier to work among them; keep the surface well hoed and free from weeds between the rows; after the flower stalks are up about 2 inches you can hoe in between the rows a little sheep manure or nitrate of soda just before rain, if possible.

The nitrate of soda can be applied with a watering can, using about a teaspoonful to a gallon of water. Leave the bulbs in the ground as late as possible in the fall as they continue to draw strength from the soil, only lifting them in time to



Chrysanthemums in Conservatory of A. B. Ormsby, Mimico.

escape being frozen. As soon as you lift them cut the tops off about two inches above the bulb, place them in baskets or shallow boxes so as to be easily handled, as you should carry them out into a sunny place every fine day to dry them off in the open air. Bring them into some place at night where there is no danger of frost. By leaving the piece of stem and their roots on and drying them slowly the bulbs do not shrink as they do when dried in a close room. In about three weeks they should be quite dry, then remove the old corm, roots and husk, or outer peeling. It is best to do this in the fall. If you leave it on till spring and the sprouts start to grow you are very apt to break them off and others may not come in their places. Another reason for stripping them in the fall is that they might draw dampness and a small, soft, fussy, white looking parasite would breed under the rough peel.

They are very injurious to the bulb and weaken it very much. Some bulbs I purchased once had them on. I did not understand how to treat them, planted the bulbs just as they were, but the parasites produced better than the gladioli, so that next year I had parasites in abundance. To get rid of them I filled a tub with water and dissolved a small cake of Sulpho Tobacco Soap in it, and put the bulbs into the solution. Result was that I have never seen any of the wooly parasites since. Any dry, cool cellar that is a good place to winter potatoes in is a good place to store your bulbs; keep them cool and in the dark so that they will not sprout until planting time comes.

B. JOHNSON: I have had some measure of success with the cultivation of gladioli this year and last, last year particularly. If you will remember last year they were almost a total failure in Ontario, but I had many magnificent blooms, some having as many as twenty-three flowers on a spike. This is the way I grow mine: About two weeks ago I started to gather some of the street sweepings and the leaves off the trees. I spread the sweepings over the ground, then gather some leaves and cover over the sweepings. I leave that all winter. In the spring I use a fork made in Birmingham, the prongs of which are 14 inches long. I put that down fully a foot, so that my ground is loosened up a foot deep, and I dig in all I can of these street sweepings. I do that early in the spring not waiting for the ground to become friable. Then about the beginning of May and a little later there is a growth of weeds on top of that ground. I plow down about 4 inches deep. I plant each bulb separately, about 4 inches deep and try to get it 6 inches deep, and arrange to have the ground loose all around the bulb. I then cover it over so that it is about 6 inches deep in the ground. I like them deep. I am not particular about getting them up in a hurry. I can imagine what a magnificent root system the bulb is getting, then when they come up they are vigorous. About once a week I go over the ground with a rake and rake it all over. I do not water them at all until the spike has left the leaves. Then if it should be very dry I give them water. I have had some magnificent blooms. There are two kinds I would like to add to the list given by Mr. Hartry with which I have had great success, the Hohenzollern, another kind with a name equally German, Schwaben.

MR. WOODS: With reference to gladioli, while the speakers have done justice to this matter generally, they have omitted mention of the most interesting phase in the cultivation of the gladioli, namely hybridization. If we growers devoted a little more energy to the cultivation of seed and hybrids we would get far more pleasure out of our work than in the growing of hybrids already produced by others. I take a very great interest in this. The expectation and anticipation will repay anyone who attempts to grow gladioli in this respect. I would like to see this feature of gladioli growing taken up more and more amongst our societies.

R. B. WHYTE: I have grown gladioli for forty years, and I have had a good deal of experience. To me the gladioli has always been somewhat of a stiff plant. If you grow these in rows that is the worst possible way. I grow mine in among the pæonies and similar plants; wherever there is a space of two feet I plant a gladioli, and I find that that has a very much better effect. You know there is nothing but green leaves for two-thirds of the summer with such plants as the pæony, and if you have a couple of gladioli grown in between them it gives you color. I find that they do exceedingly well that way. They are not crowded. My garden space is somewhat limited but I like to grow a good variety of gladioli for the reason that they produce color effect in your perennial borders where it is wanted later on in the year. We don't manure the gladioli at all. I simply use ordinary stable manure on my perennial borders in the fall.

There are a few varieties I want to mention. Grow varieties that multiply fast. You can buy a dozen bulbs of a variety and in three or four years you won't have any more. At my farm I took up something like five well developed good bulbs and three or four were quite common. Of course the soil was rich. I have a list here of the names and varieties I have on the farm and these multiply the most rapidly: Europe, William F. Pendleton, Glory of Holland, Czar Peter, Schwaben, Apollo, Carnegie, Empress of India, Mrs. Frances King, Peace, Baron Hullet, Lily Lehman, Primulinas, Halley, Hollandia. I can recommend Schwaben very strongly, it multiplies the most rapidly. I took off some of these fifty bulbs. At Ottawa we have to take them up earlier than you do in Hamilton, as our climate is more severe than yours. These bulbs I have all carefully put away in tight envelopes to plant next spring. In growing gladioli by all means grow with your perennials, having them come on at separate times. When you have one variety they all flower about the same time, and of course the effect is very much better when you have them come on at different times. There is room for an immense increase in the number of gladioli grown.

A LADY MEMBER: All I do is to put them in between the narcissi before they are quite out of bloom, and when I put away the stalks I pack them in boxes in my frost proof cellar and never lose one.

REPORT OF SUPERINTENDENT.

J. LOCKIE WILSON, TORONTO.

In this the fourth year of the titanic struggle for the world's freedom, the Horticultural Societies of the Province of Ontario have succeeded, despite the bitter contest which is still being waged, in doing patriotic work in increased production of food stuff through their gardening efforts. Many a bed that in other years was fragrant with a beauteous carpet of flowers so dear to the hearts of horticulturists was utilized for more needful vegetable products. Our winds of adversity have brought many blessings in their train, and not the least among them was the desire created in the hearts of many of our citizens to become, even in a small way, producers and tillers of the soil. In city, town and hamlet, many a vacant lot, where thistle and brier once flourished, was made to blossom and bloom into gardens fair. With enlarged vision of the thousands of amateur gardeners, and their new-born zeal and enthusiasm the goal in the near future which we should aim at is an active, energetic membership of not less than 25,000. Just think of what might be accomplished by such an army of gardeners. It is up to you, ladies and gentlemen, you who have done so much in the past, to redouble your efforts and victory will be yours. Will you do it? If each one of our members would secure one additional recruit by the fall of 1918 we would have a membership beyond the mark suggested, our present enrolment now being 17,000. Much has been accomplished in the past, but much remains to be done. Health, enjoyment, fair remuneration and a splendid example follow in the wake of the enthusiastic gardener who works in co-operation with nature and with nature's God.

"On every herb on which we tread
Are written words, which, rightly read,
Will lead us from earth's fragrant sod
To hope and holiness and God."

It was our Association that first initiated the vacant lot gardening idea in Canada and in 1909 the matter was brought directly before the Convention. In my report I urged the advisability of using vacant lots in cities, towns and villages for the growing of vegetables as well as flowers by those who, unfortunately, had no land for gardens of their own. I followed this up by arranging to have fifty members of the Ontario Plowmen's Association come to Toronto with their teams and plows and prepare the vacant lots selected for citizens who expressed a desire to become gardeners. Thus to you, ladies and gentlemen, belongs the credit of initiating a movement that has grown to such large proportions throughout our Dominion, and will continue ever broadening, forever growing throughout the years which are yet to come.

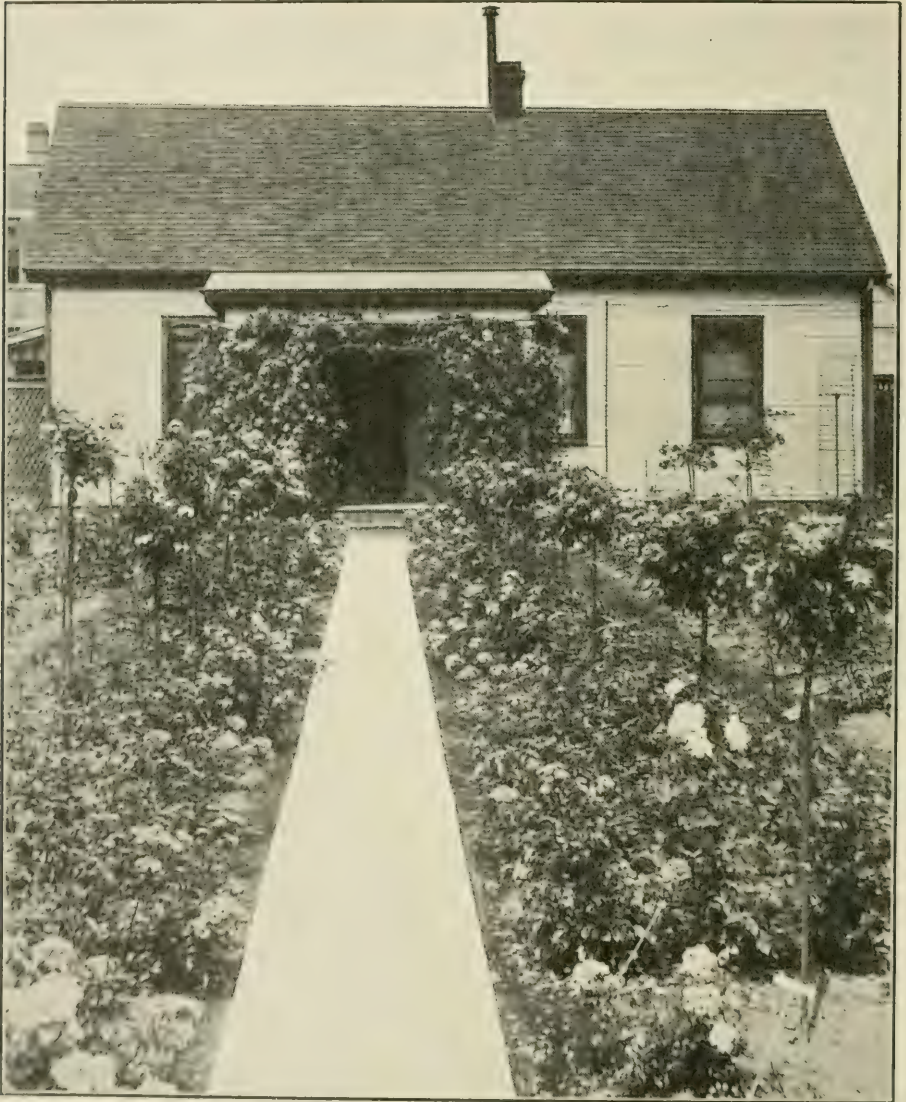
Each year shows a marked advancement in every line of your endeavor, and new societies are being organized in different sections of the Province. The following were added to our list in 1917: Alvinston, Blenheim and Harwich, Brussels, Ingersoll and Wallaceburg. I have received word from many other towns and villages in the Province, asking for particulars as to organization. Ninety societies are now entered on our roll as being regularly constituted. At the last session of the Legislature the Horticultural Societies' Act was amended and its scope enlarged, and now township societies in rural districts may be legally organized with a minimum membership of twenty-five. By this amendment the farmers are given for the first time, the same opportunity accorded to urban dwellers to participate in the work of beautifying their homes and rural school surroundings, and, of course, receiving their share of the Government Grant, which, by the way, has remained stationary at \$12,000 for many years, notwithstanding the large increase in the number of societies organized and rapid growth in membership, which will be still further increased through the recent amendment to the Act being taken advantage of by the farmers. For these reasons the grants are, and will be in the future, greatly reduced. This is a matter which should receive the serious consideration of this Convention if we are to continue our upward climb.

The work of our Horticultural Societies is a combination of practice, precept and example. Rigid economy prevails in every department. The Legislative Grant is carefully guarded and, as you know, an affidavit is required, showing that every dollar of the grant, in addition to the monies supplied by the Society, has been spent for purely horticultural purposes as laid down in the Act. If the Government Grant only was expended, not much credit would be due to our Societies, but the fact is, that in addition to the Government Grant of \$12,000 you expended in 1916, the last year for which complete returns are available, no less a sum than \$28,293, making a total expenditure for horticultural purposes of \$40,293.

The reports from all the Societies are not yet in, but, up to this time, the Ottawa Society stands in the forefront with a membership of nearly 1,500, and may head the list for 1917. In accordance with the suggestions made at the last convention, the reports from the different Societies will not be read, but will be edited and printed in the annual report. I have these reports here and if there are any special suggestions in any of them the delegates present representing the Societies which have sent in their reports might bring them before the Convention and discuss them. A number of Societies held exhibitions during the year. They all report exceptionally fine exhibits. Many Societies offered substantial prizes for best kept lawns and gardens, a line of work which is to be highly commended.

Re the resolution of the Sandwich Society, a copy of which was sent to our different branches in the Province, asking for legislation for the destruction of the

San José Scale which is doing such serious damage in the Counties of Essex, Kent, Lambton, Elgin, Haldimand, Welland and Lincoln. I would draw your attention to the fact that the Legislature has already taken steps to eradicate this destructive pest. In addition to the fumigation of all nursery stock imported into this Province and its destruction, if found infected, Section 7, 8, 10 and 11 of the Fruit Pest Act reads as follows:



A Rose Garden in Hamilton.

7. The council of any local municipality may, and upon the petition of twenty-five or more fruit growers who are ratepayers, shall, by by-law, appoint at least one inspector to enforce the provisions of this Act in the municipality and fix the amount of remuneration, fees or charges he shall receive for the performance of his duties.

8. Upon the report of the municipal inspector to the Provincial Entomologist that there is disease upon the plants on any lot within the municipality, the Provincial

Entomologist shall direct the municipal inspector to give notice personally by the inspector or by registered letter to the owner or occupant of the lot to have the plants forthwith sprayed, or to have them destroyed by burning as may be determined by the provincial inspector, and if this is not done within ten days after the notice has been given, the inspector may cause such spraying or destruction by burning to be done, and he shall report to the clerk what has been done, and the cost of the work, and such cost shall be charged on the lot and be collected as a special tax in addition to the other taxes imposed by the municipal council on the lot.

10. The council shall pay the remuneration, fees or charges of the municipal inspector and shall be entitled to receive from the Department of Agriculture one-half of the amount so paid upon furnishing the Department with a statement of the sums so paid, certified to by the provincial inspector, provided that such statement is submitted to the Minister on or before the fifteenth day of December of the year to which it applies.

11. The proprietor or manager of any nursery shall not send out or permit any plant to be removed from his nursery, until he has received a certificate from the Provincial Entomologist that his nursery has been examined and found to be apparently free from disease. Such certificate shall be good for one year from date of issue, but may be renewed from year to year.

The spraying formula issued by the Bureau of Entomology, Washington, D.C., Circular 124, is as follows:

Kerosene emulsion (stock solution 66 per cent. oil). Kerosene emulsion is made after the following formula:

Kerosene (coal oil, lamp oil)	2 gallons
Whale-oil, soap or laundry soap (or 1 quart of soft soap) ...	1½ pounds
Water	1 gallon

This is a matter of vital importance to the members of all our Horticultural Societies, and the thanks of the Convention are due to the Sandwich Society for bringing the matter before our meeting, as the following trees are destroyed by this scale: apple, crab, pear, plum, peach, sweet cherry, red and black currants.

Each year the printing of our report is delayed owing to the fact that a few Societies fail to send in their returns promptly. Where a Society has not carried out the provisions of the Act and intends going out of business, I should be promptly notified of the fact, as a certain portion of the grant is retained, so that if those delinquents, even at a late date, make a return, there will be sufficient funds on hand to meet the amount of grant these will be entitled to. Apart from these few, however, the great majority of the Societies make prompt and satisfactory returns.

VACANT LOT GARDENING.

The majority of the Societies in this Province have accomplished great things with their vacant lot propaganda. In the Cities of Toronto and Ottawa alone many acres have been cultivated. Ottawa reports over 100 acres from which 50,000 bushels of valuable garden products have been garnered in first-class condition. Those interested in horticulture in Toronto through the Vacant Lot Gardening Association have also done a splendid work and in a large way. The report issued by the Superintendent, Mr. Geo. Baldwin, states: Number of lots under cultivation during 1917, 798, all well cultivated. Number of soldiers and soldiers' families working lots, 80. Average size of lots 3,000 square feet, all marked with signboard. Packages of seeds provided, 725, of which 607 were paid for. Several churches, hospitals, homes, girl guides, boy scouts, included in lot holders. One lot looked after by a returned soldier who lost both his legs, another by a man with only one hand. The condition of both these lots would shame those who are not thus seriously handicapped. All gardens are inspected once a week and reminders sent to those who neglect their plots. The crops produced have a value of \$40,000 at a moderate estimate. It is expected that 1,000 lots will be ploughed before cold weather sets in. Lot holders can have the same ground next year provided that it

can be secured from the owners and on condition that it has been satisfactorily worked in 1917, that a full report has been sent in and that a written application is made to the secretary not later than February 28th, accompanied by a membership fee of \$1.00.

The Perth Horticultural Society has purchased a sprayer and is using it co-operatively, and the results as reported have proved satisfactory to all concerned.

A number of Societies consider that window flower displays are a good line of work and urge that it be taken up by other branches.



Cyclamen.

A novel departure was made by the Windsor Society in offering prizes for the canning of vegetables by children, the products of their own garden plots.

The Canadian Pacific Railway has done more to further the horticultural idea than any other similar carrying company in Canada. The Lindsay Society report that this Company spent several hundred dollars in making their station grounds a thing of beauty and a joy to the travellers who visit that prosperous town. Chatham also reports similar good work by this same Company. I would suggest that the officers of the different Societies in the Province take steps to induce the

railway companies whose lines pass through their towns to follow the lead so admirably taken by the Canadian Pacific Railway.

As far as the Legislative appropriation permitted we sent lecturers to a number of Societies in the Province, and if a larger grant was made this work could be extended. This grant is in addition to the regular appropriation to the Societies. Good results have followed the too limited work hitherto done in this direction.

Never before in the world's history have such startling events of mighty portent been under way. Civilization tottering in the balance and clothed in all the panoply of death-dealing devices is lined up against humanity's most brutal foes, the treacherous, barbarous seekers of world power or ruin, and, by the help of Almighty God, ruin it shall be. United our Empire and our Allies stand, divided we fall. Is this a time for rancour and party strife when the Hun is at the gate? There should be but one aim ever kept in view by all true citizens of our far-flung Empire, that is to stand united, shoulder to shoulder and side by side, so that our flag, the flag that for a thousand years has flapped and fluttered from flagstaves and masthead and over loyal, peaceful British homes, may not be lowered in this awful testing time. On the tempestuous billows of the seven seas ride victorious, thank God, the mightiest navy that the world has ever seen, guarding not only those two little isles of the ocean set in their silvery seas, but, the commerce of the allied nations of the world.

A time like this demands strong minds, true hearts and willing hands, men whom the spoils of office cannot buy, men with opinions and a will, men who have honor, men who will not lie. For while the tyrant with his war-lord creeds, his large profession and his brutal deeds, battles in selfish strife, poor Belgium weeps, wrong rules and freedom into bondage creeps.

I thank you for your kindly and courteous assistance during the year that has just closed. My prayer and your prayer, my heart's desire and your heart's desire I know, is that a righteous and lasting peace may soon crown the efforts of our gallant sons, who fight and bleed and die that freedom may not perish from the earth.

REPORTS OF HORTICULTURAL SOCIETIES.

AMHERSTBURG: This Society in addition to the care of all the public flower beds and a display of shrubbery over six blocks in length had a backyard vegetable contest among school children in which eighty-five took part. Prizes of forty dollars in cash were paid to the twenty-four who headed the lists for gardens of 150, 250 and 400 square feet apportioned according to the ages of the children.

BELLEVILLE: Distribution of seeds to school children, planting beds in parks. Plants and *Horticulturist* given to members.

BLENHEIM AND HARWICH: Organized in 1917 with a membership of 150. Rose bushes, gladioli and shrubs distributed to members. Shrubs, paeonies, cannas and cole planted around the Town Hall, and three beds set out on public school grounds. Three thousand tulip bulbs planted this fall. During the summer members exhibited rose blooms in store windows.

BOWMANVILLE: Spring and autumn plants and bulbs obtained for members and plants for a flower bed on the hospital grounds.

BRAMPTON: Spring distribution to members of one box each of salvias, asters, cabbage and tomatoes, and, in addition, each one received a canna root, and a packet of sweet pea and petunia seeds. Cannas and geraniums planted in public places.

BRANTFORD: This Society had a very successful season, the membership this year being 753 and would have been greater but for the trouble experienced in getting supplies.

The Society had competitions for window boxes, lawns and vegetable gardens for the adult members and also had a tulip competition for the school children, and gave prizes in both cases.

We have taken considerable interest in civic improvement and have planted vines at public institutions and put in a large rose bed at the sanatorium, and for next year are planning to further extend this work.

The Society has been encouraging the planting of bulbs by the school children, and the way they have taken hold of the scheme has surpassed our most sanguine expectations. We hope to still further develop this line of our work next season. We have arranged with the instructor of the Technical School to have the pupils build bird houses which are sold at actual cost to our members. We expect before long to see hundreds of these little rustic houses scattered throughout the city.

BRUSSELS: Civic improvement inaugurated in this the first year of our Society. We are greatly indebted to Mr. Hartry, Seaforth, for valuable assistance given and interest shown in our progress. Flower Show held in September, the flowers being sold and proceeds handed over to the Red Cross Society. Flowers were sent to every sick person in the community, young and old.

CARLETON PLACE: Distributed 1,200 packages of flower and vegetable seeds to the children of the Public Schools in town, in order to stimulate their interest in greater production, with satisfactory results.

Did considerable work around Town Hall, also made up a wide border 120 feet long at Central School, the labor for both of which was supplied voluntarily and represents a substantial sum.

Held a lawn and garden competition, also flower show in September at which we had 232 entries and paid in prizes \$52.25.

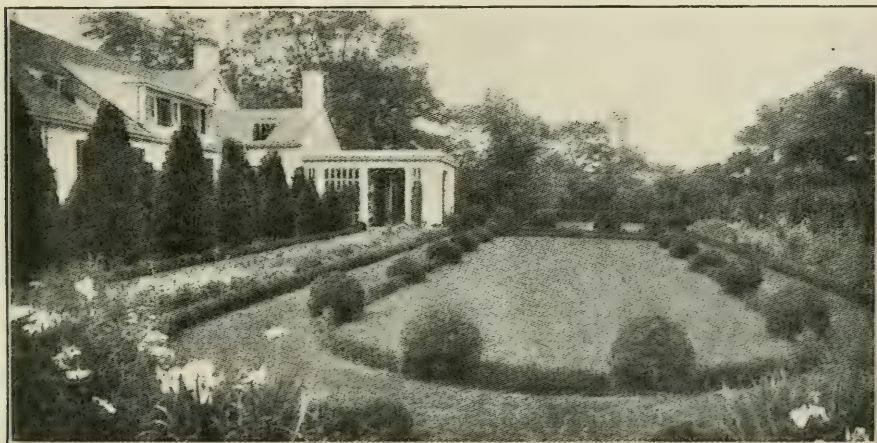
CHATHAM: Mayor proclaimed a public holiday and citizens cleaned up backyards and vacant places, and great improvement in appearance resulted. Book published containing option list and instructions on gardening, etc. Advertisements paid for cost of printing same. In options to members were five Hybrid Tea Roses. Society imported bulbs from Holland selling what they did not use in the beautifying of the city to members at cost. Beds of bulbs set out at street intersections and round Public Library, churches and in parks, vines planted on city and county buildings, and shrubs on school grounds. Urns or vases placed at street intersections and entrances to public buildings. Flag pole in Tecumseh Park furnished with flags. Mayor and Council, Board of Education and the Canadian Pacific Railway all assisted in beautifying the city.

CLINTON: The past year was a successful one. The membership increased from 201 to 250. We held a public meeting in April addressed by Mr. Wm. Brydone and Mr. G. H. Poad, London. The attendance was good and those present showed a keen interest in what was said by the speakers. Mr. Brydone urged increased production and the utilization of all the land and all the labor available. He pointed out the need for every citizen of the town to grow as much as possible of vegetable food for consumption. Mr. Poad in his address on gardening gave hints and instructions as to how each variety of vegetable should be planted, cultivated, harvested, and preserved, and those present received much needed information which bore fruit during the summer in the gardens of the town.

COROURG: The work done by this Society has been as follows: (1) To bring

to the notice of owners and those responsible, the neglected condition of several vacant lots in the town with a view to having conditions improved. A committee was appointed for the purpose. (2) The Society in past years took charge of the work of beautifying the lawn and grounds of the Cobourg Central Hospital and this year added a large number of bulbs, etc., to the flower beds. (3) The Society placed in each of the class-rooms in the Public and Separate Schools twelve pots of bulbs, hyacinths, tulips, daffodils and narcissi. They were greatly appreciated. (4) We have given to each of our members a subscription to the *Horticulturist*. (5) The Society, as a Society, took part in the spring campaign for greater production, and encouraged children and others to cultivate plots. Under the auspices of the Society, Mr. William Allan, of Toronto, came to Cobourg and gave an address on "Vegetable Growing." Townsfolk are repeatedly bearing testimony to the excellence and usefulness of his address.

DUNDAS: Plans being laid for a series of winter lectures and for extending the production campaign next year. Options given to members of roses, bulbs and



A beautiful garden.

shrubs. Bulbs have been distributed to the members. Flower beds maintained in the park, and a perennial flower bed. These are now planted with tulips. Exhibition of vegetables grown by the School Children's Club, to which the Society made a contribution, was very successful. Prizes given for bird houses and for knitting for soldiers done by girls.

ELMIRA: Distributed gladioli and flower, carrot, onion and beet seed to school children. Had a good flower and vegetable show and furnished plants and bulbs to members. Appearance of new Public Library Building improved by flower beds and window boxes.

ELORA AND SALEM: This Society had its best year since it was reorganized. Besides flower and plant exhibitions members received bulbs and plants. A large field was turned into school gardens, each child getting a lot 20 x 10 feet, and seeds and plants were supplied free. Membership increased to 95.

ESSEX: We had a most successful year our work having been amply repaid by the interest the community has shown in beautifying surroundings. It is most noticeable among the farmers. This year we hope to have a bed of flowers at every public school. Our Society has done much to increase production.

GALT: The flower beds planted in former years were well maintained, and this year several new beds have been planted in different parts of the city, which not only add greatly to the beautifying of these spots, but shows the interest being taken by the citizens in our Society, and the campaign which has been so successfully conducted for the past few years. The children's gardens were a great success, they having made a most wonderful showing at the Annual Horticultural Exhibition. The annual meeting was more largely attended this year than previously, and it speaks well for the new officers who decided on aggressive measures being taken to double the membership.

GUELPH: This Society has been very active this year taking up a number of new features such as protection of song birds, vacant lot cultivation, bird house exhibition, and placing of flower beds on street corners and boulevards. Early in the year Jack Miner gave one of his addresses on birds, the Opera House being crowded and many hundreds turned away. This address was largely responsible for so much interest being taken in our bird department this year. His address was followed by a Bird House Exhibition, the first of its kind held here; the entries were large and the quality fine. On the last evening of the exhibition Prof. Crow gave a lantern address on the habits of our song birds. Geo. Baldwin, Toronto, gave an address in the City Hall in March on Backyard Gardening, which was very instructive, especially to those who started cultivating lots for the first time. Mr. MacLennan of the Horticultural Department at the Ontario Agricultural College also gave a very interesting address in the City Hall in April on Vegetable Growing. A new department called the Vacant Lot and Foreigners' Garden Committee secured from the owners many vacant lots for the use of those who, under a signed agreement, agreed to cultivate them. The lots were plowed by the Society. Mr. Beckwith, Secretary of the Boys' Department of the Y.M.C.A., looked after the boys' department and many fine gardens were made from what have, in the past, been lots grown up with rank grass and weeds. This work took considerable money and greatly reduced our surplus, but we feel that this is a time for production and we are pleased to state that the estimate of the crop produced inside the city limits is \$20,000. We have already many applications for lots for next year and expect a large increase for 1918. The usual number of window boxes were placed at City Hall, Fire Hall and Post Office, and also three beds on street corners, which was a new feature and was greatly appreciated by the public. The Foreigners' Garden Competition started a lot of good work by Italians, and very many fine gardens were the result. A silver cup was given by ex-Mayor Mahoney for the best lawn and flower garden in the city, also a silver cup by the President, J. E. Carter, for the best vegetable garden, together with six cash prizes in each ward of the city, and six prizes for the foreigners' gardens. The entries in all classes were double of any year in our history. Two options were given to each member of roses, phlox, gladiolus, shrubs, vines and climbers, peonies and iris. Mr. John Coleman, the switchman at the G.T.R. yards, made up a very fine vegetable and flower garden alongside the track that was a blank space in past years, and many favorable comments were passed on this plot. We held a Flower and Vegetable Show in September which was a great success both in entries and in quality. Ribbons were given as prizes and the flowers were sold, both admission and moneys from sale of flowers were given to the Red Cross, the Society paying all expenses. The vegetables were given to the children's shelter. Large increase in membership, about 33 $\frac{1}{3}$ per cent. over that for 1917.

HAILEYBURY: This Society has done some very good work in the past year,

having managed to interest some who, although gardening enthusiasts, had not previously identified themselves with the Society. Prizes were given for Amateur Garden Competition and Mrs. Hay gave prizes for Cottagers' Garden Competition, both of which attracted some spirited competition. Prizes were also given for Children's Garden Competition and again good results were attained. A Potato Patch Competition was listed and also a competition among children for pressed flowers for prizes given by Mr. P. A. Cobbold, which brought forth good specimens. Prizes were given for vegetables and flowers grown by children themselves. The show from a horticultural standpoint was a great success, there being some 500 entries.

HAMILTON: Membership this year 601, an increase of 75. The by-laws governing this Society call for at least four lectures per year and this year five were given, increased food production receiving most attention, both at these meetings and elsewhere in connection with our work, and to this end over 2,500 pamphlets dealing with the making of gardens, growing of vegetables, control of insect pests, and the conservation and preservation of foods, have been distributed, as well as meetings addressed by officers of the Society. Excellent work was done by the two who represented this Society in connection with the Community Clubs which look to us yearly for assistance. Mrs. Schumacher and Miss Marjory McIllwraith, who took the short course at the Ontario Agricultural College, Guelph, made good use of the lessons learned there, and each week from early spring until the season closed visited systematically so that all the ground was covered by them four times during the season. Their helpful visits giving instruction and hints as they went has led to the request already received to send them back again next year. Children's work was not omitted entirely this year as those in West Hamilton Club were given garden inspection and at their exhibition the winners were rewarded, garden tools going to eleven boys and girls, the cost being generously assumed by Mrs. Hendrie. The children connected with the Presbyterian Italian Mission had little plots under the supervision of Miss McIllwraith and intend to do more next year. These received recognition from us this year and books and diplomas with their garden pictures made some young amateurs in the north end very happy. By interest of members and the co-operation of the Society much of great value could be accomplished in this line of work. One donation of 1½ dozen geraniums was received, and under the tuition of Miss McIllwraith the children were taught to make cuttings and pot the plants and slips. Only a few gardens were opened and visited this season, but these were fully appreciated, the limit being due to the membership working at food production. The grounds in front of the Barton Street Convalescent Home needed attention, and the request for some floral decorations to make brighter surroundings for our returned men met with response from the Board, so hanging baskets and boxes were filled and beds planted. Spring and fall distributions of premiums were arranged, and, in the spring, vegetable seeds went to over 200 persons. Distribution of garden literature received some attention, as returns from previous years show the value of this line of effort; for instance, at a club's competition the winner of a 1st prize for best collection stated that this was due to reading the books given by us to another club for their reference library, so this year as the secretary of the East End Y.M.C.A. reported a dearth of information along gardening lines, and as it was desired, a set of garden books was given. In the conservation of bird life, a work previously undertaken by us, there was a competition limited this year to the Manual Training classes of the Caroline school section.

HANOVER: Large increase in membership. Considerable improvement carried out in town, planting vines around factories, and putting up of pretty window boxes on several large institutions. Society secured a piece of land for a Demonstration Plot, part to be used for nursery stock and the rest for different kinds of flowers for the members so that they can purchase their stock in good condition. Mr. Tomlinson, of the O.A.C., Guelph, drew the plans for this plot and also for decoration of the Public School grounds. The children have become interested in



Snapdragon potted for winter.

the plan and have raised money to purchase bulbs for fall planting, the flowers for the summer beds being supplied by the Society. Mr. McLennan, of Guelph, gave an illustrated lecture on Vegetable Growing which was much appreciated.

HESPELER: Membership is 111. We have distributed flower and garden seeds to each member this spring and also given the *Horticulturist* to each member, and also bulbs as a fall premium. We planted beds on the Town Hall property and have had a good year.

HIGH PARK: This year our Society advocated the growing of vegetables to a

greater extent, and gave a series of lectures on same, and the results as shown by the way our members exhibited vegetables at our Fall Flower and Vegetable Show were very gratifying. We were again fairly successful this year in having a few places in our district improved. The number of entries at our Midwinter Bulb Show and at both our Spring and Fall Shows exceeded other years, and keen interest was taken in our Annual Garden Competition. Membership increased this year to 155.

HILLSBURG: Successful exhibition held in August with 800 entries. Members received options on seeds and bulbs.

INGERSOLL: Organized in 1917, this Society commenced operations with a membership of 175. Held very successful flower show. Also gave premiums with each membership which will be increased as funds permit. Spring planting consisted of 1,000 roses and 300 shrubs, besides 2,000 perennials and annuals. The Society expended about \$100 on school grounds and public beds, which work is being continued this fall, and, as a result of this, a considerable movement is noticeable throughout the town and many beautiful private gardens are being planted. Bulbs imported this fall amount to 32,000, among which are many rare varieties.

KINGSVILLE: A large consignment of bulbs from Holland is expected daily. We had a good showing of tulips on our streets last spring and members have become intensely interested in growing them. We hope next spring to have a fine tulip show.

KITCHENER: Membership shows a slight decrease, a result perhaps of the Home Garden Association formed here at the beginning of the year and the fact that the directors got such poor treatment from the city. The bright future of the work has been among the school children, where an increase of over two hundred members has been secured. The work done in the gardens by the children was very good, and the judges of these plots had no easy task in making the awards. At the Annual Exhibition held on August 22nd and 23rd, the school children to the number of seventy exhibited products of the seed supplied by the Society which were equal and in some instances superior to those exhibited by the adults. The exhibition was a success in every way, the flowers and vegetables shown being very good and the attendance much in advance of previous years. The Society held an Outdoor Competition as in former years and procured judges from outside, who in all cases commented on the good appearance of the homes and gardens of the city.

LINDSAY: Membership this year nearly 300. Held a Bird House Exhibition and gave valuable prizes to the children of each of the five schools in town for the bird houses. We had a column in each of the daily papers weekly, devoted to Horticultural Notes, during the year, which was of considerable interest to many of the members, this space being given free by the local papers. A good display of asters (which is the floral emblem of the Lindsay Society) and other flowers as exhibited at the Agricultural Fair on September 21st, 22nd and 23rd, and prizes offered to members of the Society. This display was much admired and was the means of securing many new members. There is a desire on the part of many members to have a competitive exhibition earlier in the season before the flowers are liable to be injured by frost. Through the influence of the Horticultural Society here the Canadian Pacific Railway have chosen to make Lindsay one of their major flower gardens, of which they have several between the Atlantic and Pacific. They have spent upwards of \$500 this year on their station and grounds in flowers, shrubs and trees, and cer-

tainly deserve the heartiest commendation of the Horticultural Societies throughout the Dominion.

LONDON: The year past has been a very successful one from every standpoint, the membership of 617 paid members being the largest for recent years. The society undertook some new plans which brought it more prominently before the public. In the early spring, Mr. Smith, who was then parks superintendent, very kindly gave his assistance in the way of several lectures and practical talks to good audiences in the Public Library. These lectures created a greater interest in these things on those who heard them, and, as a result, more flowers and vegetables were raised this past year in the city than ever before. The Canada Trust Company, having offered substantial prizes for backyard gardens, solicited the assistance of the directors as judges of same. Inspections were made at stated times and awards made, which proved of great interest. Two flower shows were held during the year and were very successful. The plan of giving awards was adopted and helped very much in creating a greater interest with the exhibitors.

MILTON: Membership, 101. In the spring, aster seeds were distributed to school children for competition in the fall. Flower show held on September 12th. Lawn competition held during the summer, and also a vegetable garden competition, and prizes awarded for window boxes and hanging baskets.

MITCHELL: Membership increased to 132. Good work done in educating the citizens by example. Besides looking after flower beds round the Post Office and Public Library, the new School Grounds are now laid out and beautiful flower beds on three sides of same have a constant educative effect on the children. The caretaker is an active member of the Society and takes pride in keeping the grounds beautiful. Fruit trees were given as premiums to members.

NEWCASTLE: Eleven regular and two special meetings held and an afternoon and evening demonstration of vegetables. Each member received a dollar's worth of flowers and shrubs, and flowers were donated to churches and public school grounds, and window boxes to the Post Office. A start was made in putting into order an unsightly vacant lot in the centre of the village. Membership well sustained.

ORANGEVILLE: The usual choice of premiums in seeds, bulbs, plants, shrubs and trees was furnished to members. Orders for horticultural supplies were filled at 15 and 20 per cent. discount. The privileges of our organization were offered to non-members in the purchase and selection of farm and garden seeds at a considerable discount. In response to the appeal for increased production an active interest was awakened in gardening. We planted bulbs and bedding plants in thirteen beds on our streets and public grounds and cared for same. Organized Princess Patricia Park Association and received charter for same. This property, comprising three acres of waste land centrally situated, formerly covered with large limestone and scrub cedar trees, is now in the process of reclamation. Through the co-operation of our members and other citizens, volunteer work has accomplished wonders. Unightly rail fences have been removed, drains dug, and the large stones assembled in piles for rockeries and on the roadway. Deciduous and evergreen trees were also planted on the border of this property in the spring. Proceedings have been taken under the Ditches and Watercourse Act to drain this land. Awards have been made by the engineer, tile ordered, and contract let to complete the main drain this fall. A number of maple trees for street planting were also furnished our citizens free. A very successful Horticultural Show was held in September.

when prizes were awarded to products grown from seed donated to children of our Public School.

OTTAWA: Most successful year in history of the Society, membership being 1,457. Early in the season plans were laid to carry on a campaign of useful work. A number of special committees were appointed. Each committee consisted of several directors, and in some cases an outside member who was particularly interested in certain work, was asked to serve with the directors. The Publicity Committee enlisted the aid of many of the directors and several qualified citizens in the preparation of a series of special articles for the local newspapers. The newspapers gave extra prominence to these articles, which appeared in their special Saturday



Patriotism and Roses in Hamilton.

editions. The series of articles ran for about three months, from three to six articles being contributed each week. All phases of vegetable, fruit and flower gardening were dealt with. Special prizes and donations were collected by one committee in greater quantities than ever before. Children's work was organized for the first time by another. More educational and special outings were also organized. Two series of lectures were arranged by the Lecture Committee, one consisting of a short course of lectures and demonstrations in practical home gardening, and the other of a series of demonstrations on the canning, drying and storing of fruits and vegetables. Special lecturers and demonstrators took part in these courses. An innovation was made in regard to the Society's flower shows, two of them being held in centrally located city stores, and the flowers sold under the direction of the Ladies' Auxiliary for patriotic purposes. In the garden competition work another innovation

consisted of the provision of a special class for war-time gardens. In this class two silver cups were awarded, as well as attractive money prizes and silver cups to lady members of the Society to encourage more work by members of this sex. The Ladies' Auxiliary of the Society undertook the work of distributing the flowers to the city hospitals, which work has been much appreciated for several years. The largest amount of new work done by the Society, however, was the organization of the Ottawa Vacant Lot Association. More than half of the directors of the Ottawa Horticultural Society worked for this Association, which obtained a membership of over 1,200, bringing under cultivation more than 100 acres of land which in 1916 grew nothing but weeds. It is estimated that about 50,000 bushels of produce was the reward for the extra work along horticultural lines. A number of general meetings were held as usual and five floral exhibitions. The distribution of plants, seeds and bulbs constituted as usual one of the most appreciated and fundamental works of the Society and was even more successful than anticipated. The Society at one of its special outings to the Government grounds at Rideau Hall elected Lady Anne Cavendish, the youngest daughter of their Excellencies the Duke and Duchess of Devonshire, as its Honorary President.

OWEN SOUND: This Society aims at giving its members good value for their fees by securing reliable stock at fair prices. Membership has increased considerably. The work among school children has been greatly extended, 430 scholars participating. Each one received packets of beets, carrots, corn, onion, lettuce and radish seeds, one pound of potatoes and two tomato plants, paying fifteen cents for these, the cost to the Society being twenty-five cents. Many of them sold several dollars' worth of vegetables; others supplied the family table. Principals, teachers and school board are learning the practical benefits of this line of work and are greatly assisting in it.

PARIS: This Society has made a steady advance during the year, the membership having grown from 226 in 1916 to 300 in 1917. Great difficulty was experienced in procuring roses and gladioli, but notwithstanding this, every member was supplied, choosing the rose option with four first class hybrid tea roses. Six hundred and twenty roses were distributed as premiums and upwards of 100 sold. About 4,000 gladioli bulbs were also given as premiums, as well as numerous shrubs. A Rose show was held in July, and a general flower, fruit and vegetable exhibition in August. A new undertaking was the transformation of an ugly plot of land, known as the market square, into a small park. This has given unbounded satisfaction.

PERTH: As in former years, last spring we distributed a great variety of flowering shrubs, fruit bushes, bulbs and plants, and this fall winter flowering bulbs, made up of Easter lilies, narcissus, tulips and hyacinths. There are in Perth a number of members who are deeply interested in Horticulture, and are thorough and practical gardeners. For years our Society has sprayed fruit trees and shrubs on a co-operative basis in the spring, and a year ago we purchased a sprayer of our own, and we are able to report that the spraying has been a success financially as well as beneficial to the fruit-bearing trees of our members. This year we gave our trees two sprays, one as the blossoms were opening, and a second and last spraying as the blossoms were closing. Some of our members have reported that notwithstanding the sprays given their trees, worms found a lodging place in the fruit. It was a matter of observation that they did not enter the calix end of those apples that had been sprayed with the poisonous solution, but on the side, especially where the apples

were hanging in a cluster. Our members would like to be advised if there is a cure or preventative for the worm that enters the apple at the side.

PETERBOROUGH: The Horticultural year just finished has been a fairly successful one. The membership was slightly lower to that of last season, but much good has been accomplished. In the spring a choice of some thirty options was offered members, including shrubs, perennials, annuals and the *Canadian Horticulturist*, while this fall bulbs were distributed as usual. The Society, by means of a grant from the city, cared for the two central parks, which were in excellent condition through the summer. We also distributed free Boston Ivy to some of our public institutions, and will supply the balance next season. The Annual Lawn and Garden Competition was much better than usual, as we were able to offer three special prizes kindly donated by three directors, and marked improvement can be noticed during the period of the last five years resulting from this friendly competition. Peterborough, like the rest of the Province, joined heartily in the back garden movement, with the direct result that many homes have almost a complete supply of vegetables for the winter, and greater results are expected next season.

PICTON: Membership nearly doubled. The Society distributed seeds, roses, pæonies, dahlias, plants and gladioli bulbs. This fall tulip and hyacinth bulbs were given. The address of Mrs. Potts, of Hamilton, illustrated, on March 30th, was very interesting and instructive.

PORT HOPE: This Society has proceeded along lines similar to former years. We furnished our members with plants, bulbs and *Horticultural Magazine*, and aided the Port Hope Hospital in beautifying their grounds, and otherwise encouraged our citizens in civic improvement. We aided in the movement last spring for Garden Production, and largely through our efforts a Garden Production Committee was formed which did splendid work.

ST. CATHARINES: This Society has closed one of the most successful years in its history. We offered with the usual premiums of bulbs, plants and shrubs, one of vegetables, as an inducement to encourage thrift, and urged every one to utilize every available foot of ground. Prizes were offered for the following gardens: Best cropped lot grown to potatoes only; best cropped lot grown to vegetables only; best back garden grown to vegetables by soldiers' dependents. They were all entered into with keen interest and eighteen prizes in all were awarded. We supplied 3,000 school children with aster seeds and gladioli bulbs; held two magnificent exhibitions, a Rose Show in July and the Fall Show in September, both of which exhibitions would be very hard to surpass, for our Armoury was a mass of most beautiful colors, and in September we had a splendid exhibit of vegetables grown and cared for by some of our Local Girl Guides. The proceeds from the sales of flowers and from refreshment booths at the July and September Exhibitions were given over to patriotic societies.

ST. THOMAS: The year 1916-17 has been on the whole the best year in the history of this Society. During the winter and spring excellent addresses were given by H. J. Moore, Niagara Falls, on "General Floriculture" and "Roses"; Miss Louise Klein Miller, Cleveland, on "School Gardens"; George Baldwin, Toronto, on "Home Gardening"; and by J. A. Washburn, on "Dahlias." A Home Gardening section was organized and several acres of vacant land obtained on which fine crops of vegetables of all kinds were grown. Interest in flowers was kept up by several special shows and by a continuous display of exceptionally fine blooms in one of the finest show windows in the heart of the business district. Here were shown

tulips, hyacinths, iris, roses, sweet peas, pansies, gladioli, dahlias, and other blooms, all shown in handsome receptacles of a suitable shape and color for the particular flower. This has again proved to be one of the finest educational features of our work. The special shows were the Annual Tulip Festival for three days in May, which was again a great success and created widespread interest, visitors attending from all parts of Ontario in spite of the backward weather at the time; a show of gladioli at which eighty varieties were shown, and a dahlia show which included 150 varieties. No finer display of either gladioli or dahlias has ever been made in Ontario. To assist in the work in other cities and towns, we sent large exhibits on several occasions to shows and fairs, and on no occasion entered for competition, although our exhibits would easily have won a place. We exhibited tulips at Tillsonburg, London, Ingersoll, and Aylmer; roses at London; seventy varieties of gladioli at Toronto Fair; one hundred and fifty varieties of dahlias, seventy-five



Pæony bed in full bloom.

varieties of gladioli and various other flowers at London Fair; and a large display of gladioli, asters, etc., at Wallacetown Fair. We answered a great number of enquiries from other societies and from localities in which no society had as yet been organized. We lent our colored lantern slides on several occasions and our president addressed meetings in several places. We also helped several societies in their buying, and by co-operation we obtained very low prices and a very high quality of goods. During the year an arrangement was made with the M.C.R.R. Company, and the beautification of the lands near their depot was begun. The land has been ploughed, levelled, thoroughly summer fallowed and the walks and beds laid out. Next year the work of planting shrubbery beds, flower beds and trees will be gone on with, and in time a beautiful park will have been created out of what has been for a generation only a vacant commons. The work of beautifying streets and boulevards has been continued and many plants and shrubs presented to city parks. Among these were 250 selected perennials, and several rare roses and other shrubs. In the public beds along boulevards were planted nine thousand cannas, geraniums, salvias, coleus and other plants. Cement urns filled with geraniums and other flowers were continued at the corners of business streets and in front of public

buildings. Bouquets were sent to the hospitals, churches, and to the sick as in former years. During the season from two to four men have been employed on the public beds and boulevards at an expense for wages and teaming of seven hundred dollars. Total receipts for the year, including donations, membership fees, bulbs and plants sold and Government grant and city grants were six thousand dollars.

SANDWICH: This Society had a very successful year. The annual Flower Show was held as usual with a very good exhibit in the Town Hall on September the 5th and 6th. The Society again kept all the boulevards in the town free from weeds and long grass. In addition to setting out about fifty corner beds and taking care of the small Soper Park, we kept a man on all summer. Our membership has been more than maintained, having been increased to 281, as against 257 for last year. Our expenditure was over \$1,300. Every member receives the *Horticulturist* in addition to options.

SEAFORTH: This Society had another successful year, with a membership of 220, or double that of 1916, the increase being due to an energetic secretary and a live board of directors, who look forward to the 400 mark being reached in 1918. During the year the flower beds at the Post Office, Town Hall, Carnegie Library, and Victoria Park were planted with cannas, salvia and crocus, and donations were also made to the Public and Separate Schools and Collegiate Institute. Owing to the scarcity of labor the area at the G. T. R. depot was not put into shape, but the Society and the officials of the railway hope to have this done during the coming year. The annual flower show was held on September 14th, and drew a record attendance, the entire exhibit of cut blooms being donated to the Red Cross Society, the net proceeds amounting to \$40. Roses, dahlias and asters were shown in many new tints and shades, the rose blooms especially being fully as good as the June flowering. As the number of rose growers in town has increased remarkably during the past few years, the Society intend holding their first Rose Show next year. Instead of the usual distribution of bulbs for fall planting, the Society gave each member three varieties of fibrous-rooted begonias.

SMITH'S FALLS: This Society is one of the live factors in this community for the beautifying of the town, for increased production, and for the training of the boys and girls in the necessity and dignity of labor. We distributed flower and vegetable seeds to the school children, as well as tomato plants, and in September held a show in connection with our own Autumn Show, when liberal cash prizes were given for flowers and vegetables. Our members grew double the quantity of garden produce, as well as promoting the cultivation of vacant lots throughout the town, caring for the town parks and planting the flower beds and window boxes around our public buildings.

TILLSONBURG: At the beginning of the year a good deal of assistance was given to the campaign for food production. Public meetings were held at which illustrated addresses were given, and the movement given the greatest impetus possible. Window shows were held and a local window used for display of individual blooms properly described. Beds about the town hall and in other parts of the town were planted and the small park was cared for. The usual show in the late summer was held in the town hall and was visited by a large number of flower lovers. Bulbs and plants were imported in large quantities and distributed to the members. Perhaps the best work of the Society lies in the great development of the culture of the tulip. Two years ago the Society captured the handsome trophy at St. Thomas. This has made the members proud of their skill and anxious to hold the cup for the third suc-

cessive year. All the flower lovers in town are planting tulips and the finest specimens are to be seen in the gardens here. The exhibition of late tulips held by the Society would be hard to surpass. To this display the neighboring towns sent their best blooms and it has promoted the organization of societies and has brought life to others. Hundreds of varieties of Darwins, Cottage Breeder, Rembrandts and Parrots were seen by the great crowds who thronged the hall.

TORONTO: Silver and bronze medals were donated to the public schools for competition in flowers and vegetables. The Military Convalescent Hospitals were supplied with flowers, and \$150 worth of seed potatoes given to the Vacant Lot Association. Held a show in September of vegetables and bouquets of flowers open to the public, in which there were classes for returned soldiers and wives and dependents of soldiers on active service. A large quantity of seeds in packages were also given to the Women's Thrift Society. Regular monthly meetings held and interesting addresses given at same.

WALKERTON: Flower and Vegetable Show held on August 24th, the prizes being bulbs or plants from the greenhouse supplied at wholesale prices. Each member received fifty cents to expend on bulbs and plants, and also the *Horticulturist*.

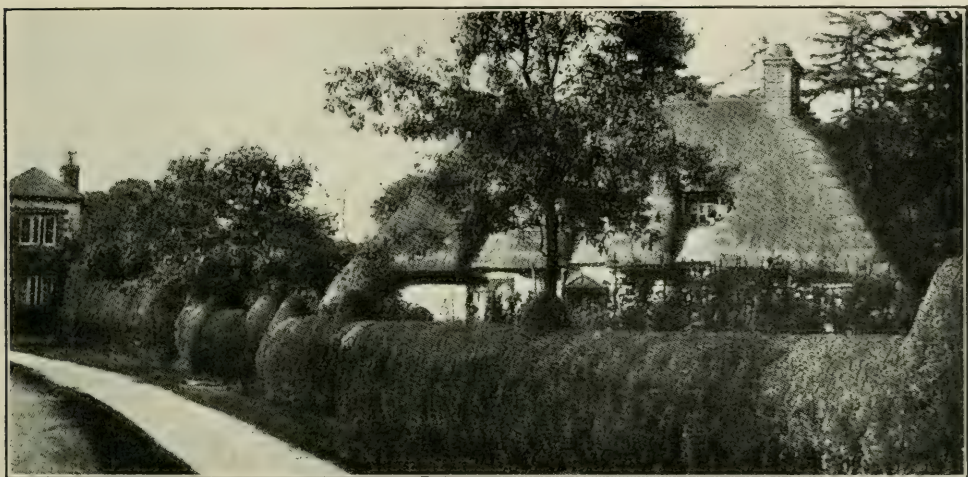
WALKERVILLE: Over 7,000 packages of seeds given to school children, and plants, shrubs, roses, bulbs and ferns to members.

WALLACEBURG: The officers and directors held meetings in the Public Library regularly to plan for work to be done, and we laid out sixteen public beds throughout our town, planted with cannas, salvia and geraniums, etc., besides securing three different plots of ground that we laid out into public parks, which were very tastefully arranged by our two nurserymen. We gave options of shrubs, cannas, salvia, gladioli and geraniums to our members. We received several donations of money for our Society: \$100 from our Town Council, \$25 from the Glass Factory, \$25 from our Sugar Factory, \$10 from the Masonic Lodge, \$20 proceeds of sale of cut flowers at the Fall Fair, and \$22 from three members. We have ordered 12,000 tulip bulbs through the St. Thomas Society, to be planted as soon as received, half of them for our public beds, the other half for members. We also requested our Town Council to have the water piped to these public parks, and they granted our request, and we bought fifty feet of hose for one park opposite the Public Library. Membership is 137, which is most creditable for a new Society.

WINCHESTER: Membership, 182; increase over last year of 17. Last spring the usual plan was followed of supplying perennials, shrubs and plants to members as their options from the Society. In addition to this any member who wished to order extra supplies were given same at cost price through the Society, to encourage the planting of flowers and shrubs to beautify our town. We cared for the flowers around the churches, schools, park and hydro grounds, and planted trees along the main thoroughfare to C. P. R. Depot. This spring each child over ten years of age was given a package of carrot and beet seed and one dozen onions, with the object of planting them and exhibiting at our Fall Fair. It proved a great success, as there were a large number of entries, and we offered four money prizes for each section.

WINDSOR: During the last year there have been a great number of activities in connection with our Society and we have accomplished a great deal, and created an influence, especially among the children, which will have a very lasting effect. Mr. T. Carter gave a talk on "Parks" at the time when the city was about to form a Park Commission. We feel that we aided the movement whereby a Park Commis-

sioner for our city was elected. In the fall we encouraged the boys in the Manual Training Classes to build Bird Houses, and offered \$35 in tools, as prizes. The Bird Houses were on exhibition in Grinnell Bros.' window for three days and were sold, and the boys donated a portion of the money to the Patriotic Fund. Mrs. Potts gave us a very practical talk on gardening at the Collegiate, illustrated. At the lecture we had on exhibition several cans of vegetables and fruit, kindly loaned by Mrs. Colby, Walkerville, which had been canned by the cold pack method. These were of great interest to the ladies, who were encouraged to try this method. The Home and School Garden movement, which was started three years ago, was continued with more interest and better results. The Board of Education gave great encouragement, and there were nearly 20,000 packets of seeds sold. There were not so many Home Gardens as there were the previous year, on account of the Resources Gardens. The Resources Gardens were under the supervision of our President and



Typical English cottage and hedge.

the Chairman of the Board of Education, and were worked by 310 of the school children. The products of these gardens were all turned over to the Resources Committee and were canned and sold for the Patriotic Fund. The School Garden Competition was very keen, and Cameron Avenue school garden was adjudged the best, and they now own the silver cup, donated by this Society, they having won it for two consecutive years. A window Flower Show held at Jeff's grocery store realized a nice sum, the entire proceeds of which were turned over to the Red Cross Fund. Great preparations were made by us for the annual fair. The Horticultural building had been re-decorated very artistically for us, and we had a very splendid exhibit of flowers, grasses, fresh vegetables and canned vegetables and fruits, all exhibits being grown by members of our Society, mostly children. Several prizes were given to encourage the children, who were very enthusiastic. Through the efforts of our President the children were taught to do canning, and several of them canned the vegetables from their gardens, which were also exhibited at the fair. We had a flower booth, the flowers being donated by our members, and the proceeds were given for patriotic purposes. We had a very novel attraction—a booth decorated with vegetables, grains and root crops grown by the inmates of the London Asylum.

WHITBY: Most of our work has been of a similar nature to that carried on in previous years. Last spring, just before gardening operations commenced, we discussed the conducting of weekly lectures on vegetable and flower growing with the High School Board. The Principal of the High School, Mr. Johnson, agreed to this, and we decided that for six consecutive Wednesday evenings, we would arrange for a lecture on some phase of gardening, in the Assembly Room of the High School. Lecturers were sent from Toronto, besides local speakers. The interest taken in the work by those who attended was very gratifying, and considerable good was accomplished. In the spring, the usual selection of seeds, plants and bulbs was offered to the members as an option. In addition to this, we distributed about 500 or more packages of staple vegetable and flower seeds among the school children of the town. We also supplied plants and bulbs to one of the schools to be used in decorating the school grounds.

In September a vegetable, fruit and flower show was held, at which the greater number of exhibitors were children who had received seeds from the Society in the spring. Open classes were also included in the prize list. We had one of the most successful shows that we have yet held. Nearly all of the classes were well filled and competition was keen. The prizes in most cases were composed of fall bulbs, as it is the aim of the Society to encourage the growth of flowers and vegetables. This fall we have distributed the usual amount of fall bulbs for indoor culture among the members of the Society. In addition to supplying seeds, etc., as options for the Society, extra plants were procured for members, and they received reduced rates on all of the material that we have supplied, and we endeavor to get everything true to name and of good quality.

WOODSTOCK: Bulbs, shrubs, roses and bedding plants distributed to members, and 868 packages of vegetable seeds to school children, the products to be exhibited. There were 420 entries for same. Membership trebled over that of last year, being now 300.

THE PRESIDENT: We are all delighted with that excellent report. I want to congratulate Ottawa on the splendid membership they have acquired, and also Toronto and Ottawa for their splendid work in the Vacant Lot Gardening line. It is really wonderful what they are doing. I have no doubt a good many of the societies in the smaller towns and cities are doing equally as good work in a smaller way.

While we in St. Thomas have dropped in membership this year, we have increased our assets by about \$1,000, and, in justice to the railway companies, the Michigan Central have granted our Society \$500 a year for five years. I mentioned this morning my gratification at the work in the Vegetable gardening line. I refer particularly to the work of the two big cities mentioned in Mr. Wilson's report. Now that should be the big end of our work. We must not forget the beautification, of course, but we must more than ever emphasize the vegetable production. I had never grown a vegetable before this year. I had all flowers. This season I secured a lot, and we now have potatoes of my own growing. Our Society reclaimed a vast weedy area. When we go and ask for additional support from the Government we want to put the practical end up to them and show them what the horticultural societies are doing in the way of increasing food production.

J. A. WEBBER: The Hamilton Horticultural Society is strong on vegetable growing this year, having associated themselves with the Garden Club of Hamilton.

We grew 2,400 bushels of potatoes. Mr. W. G. Walton gave prizes of \$100, the Hamilton Horticultural Society gave \$20, and the Hamilton Scientific Society \$10. This year we distributed \$250 worth of garden seed. Over 255 members took up lots of the Garden Club, and the members of the Society generally went largely into vegetable growing in their back gardens. Of course the price of seed potatoes was very high this year and the profit may not have been as great as might be expected, but still a large quantity were grown, and the plots are in better condition for cultivation next year. The Society will take the same stand this coming year as it has taken in the past. It will lend every possible support and assistance to its members and the public generally in planting vegetables and garden products next year.

MR. FULLER: The Windsor Horticultural Society distributed about 20,000 packets of seeds among school children, and gave prizes. We had a showing at the Agricultural Society's fair, and altogether we had a very successful year, and I think it will be improved upon for 1918.

MR. BAKER: In Lindsay we worked about fifteen acres of vacant lots that had been overrun with burdock and other weeds, and we raised about \$2,000 worth, and the work is practically just started, but we think that next year we can do very much more. The work is being backed up by all the organizations in the town, and was started by the Lindsay Horticultural Society.

REV. T. H. BROWN: We have had a most successful year in Seaforth in every respect. Not only have we utilized every vacant lot and grown a tremendous amount of vegetables, but we also went further through the whole County of Huron, and lectured for the benefit of those people, that they might also take up the work, and the amount of stuff that has been grown in the vegetable line has been most extraordinary. As far as I am concerned, I have grown a great deal more vegetables than I can possibly use. I am not very fond of cabbages, but I grew a great quantity which I am very pleased to give out to anybody who wants them.

MR. NORMAN: In addition to the vacant lot production in Galt, which we have carried on very aggressively, we have rented about twenty-five acres of land from farmers and planted that chiefly in potatoes. On account of the high price of seed potatoes we did not make anything, but still the potatoes raised do not cost us more than \$2.00 a bag. That is in addition to the vacant lots, of which we have a hundred. Of course back gardens were also cultivated.

A MEMBER: This spring, when the president of our Barrie Society took up vegetable production, he wrote a letter to the Board of Trade and Council, offering our hearty co-operation in anything they would do. The result was that a club of the business men of the town was formed and associations were gotten up that soon brought the business into shape and the result was most satisfactory. We had good results so far as the town was concerned in the growing of vegetables, and I think our people are in many cases fairly well supplied with ordinary vegetables for table use. Although some people have been saying that next year these plots will be overrun with weeds, we have put our heads together and we will not stand for that, and will see to it that these plots are trimmed up and made to look decent.

MR. ROBINSON: I ask Mr. Wilson what the Government's attitude is in regard to the suppression of the San José Scale, as to what a municipality has got to do in order to enlist the Government's assistance in regard to it. Mr. Wilson's answer would be of great value to the Convention.

J. LOCKIE WILSON: I refer Mr. Robinson and the Convention generally to sections 7, 8, 9, 10 and 11 of the Fruit Pest Act as quoted in my report. The action

to be taken is left altogether in the hands of the municipalities. If you cannot get twenty-five farmers or fruit growers in any locality to sign a petition for the destruction of this pest, you can scarcely expect the Government to take further action. Passing resolutions will not have the desired effect. You might ask that the Legislature make the Act more stringent and compulsory.

MR. RODNEY: We have had an inspector in Walkerville for the last four years and pay him \$100 a year. The Sandwich Horticultural Society sent us a circular asking us to co-operate with them. We advised them that we had an inspector. We wrote to the Agricultural Society about it, and had the satisfaction of being advised by them that they would pay half the inspector's fees.



Photo. Geo. Pelton, Hamilton.
Tausendschon and Crimson Rambler Roses.

A MEMBER: A lot of affected trees in Walkerville have been cut down by the inspector in spite of the protests of those interested.

R. WHORLEY: This Association should follow up the diseases brought in from abroad. The Act covers stock in Canadian nurseries, but does it also cover what is shipped from abroad?

J. LOCKIE WILSON: It would be a ridiculous proposition for the Government to pass an Act to cover our own nurseries and then allow outside stuff to be shipped in infested with the pest. The Federal Department of Agriculture have control only over the importation and exports of nursery stock, etc. I again repeat that on petition of twenty-five interested parties to the municipal council they must appoint an inspector. This is imperative on the part of the municipal council.

MR. WHORLEY told of an incident where he ordered \$220 worth of bulbs from a firm in Holland. The stuff was shipped, he said, to Haliburton in error. When it

finally came to him some of the lilies of the valley had rotted in the boxes. The bulbs had a good deal of fungus, and had, he found, never been inspected by any person or persons from New York on until he received them. He inspected them and sent them back to the agent in New York. The consequence was he refused to pay for them. In October he received a summons to pay for them. He had had the customs officers inspect the bulbs after opening, and had a bill of expenses of \$150. "I faced the trial with my witnesses and won out. I then turned around and sued the company for \$100. I got \$70, but the Government never helped me to get that money from Holland. I had my witnesses and my solicitors to pay. What are we going to do as an Association if we are going to have it put over us like this by a Canadian law? If we lose a case the foreign firm can collect the money; there is no law here to protect us."

DR. BENNETT: If you will write to Dr. Gordon Hewitt, Ottawa, he will send you a copy of the Pest Act. The Tillsonburg Society had some bulbs examined and they found them full of some disease. We should take up the delays with nursery stock and bulbs at the frontier. I don't know who is to blame, but shipments are delayed for days and sometimes weeks, and then the boxes are thrown together and sent on the railroads when they are ready. There might be an excuse this year, but it has occurred in former years as well.

VACANT LOT GARDENING.

THOMAS D. DOCKRAY, TORONTO.

Vacant Lot Gardening in Toronto, in a large, organized way, began in 1915 with 150 lots. In 1916 there were 300. And this year, 1917, the Toronto Vacant Lots Cultivation Association, in co-operation with the Rotary Club, had 800 lots on which vegetables were grown. The Association obtains the use of these lots from the owners by promising to vacate on a week's notice. The lots are manured and ploughed in the fall, if possible, and harrowed in the spring. In order to lose as little time as possible over the preparation of the ground, the Association tries for the largest piece of vacant land first. One of their patches is a small farm of thirteen acres, affording lots for sixty-five gardeners. But, where gardens in any neighborhood can be found or obtained by the people themselves, the Association will prepare these gardens, even though they may be as small as 80 by 100 feet, making enough for two gardeners. The Association tries to give each person a lot 50 feet by 80 feet, and the average runs about that size. Mr. George Baldwin is the superintendent of all this work, and will willingly explain it to those desiring to form Vacant Lot Gardening Associations. And it is urged upon all Horticultural Societies and civic bodies to form such.

DESCRIPTION OF LOT.—On the corner of Dovecourt Road and College Street there were four Vacant Lot Gardens, each with a frontage of 50 feet on College Street and a depth of 80 feet, or 4,000 square feet. Mine was the most westerly lot of these four, next to the lane. Across the lane is a moving picture theatre, three storeys high, that shades the westerly 20 feet of my lot from about 4 o'clock. High trees on College Street shade the southerly 30 feet of the lot from 10 o'clock until about 2. The soil is a brown sandy loam, naturally good. But the greater part of the lot, in fact, the part of it in full sun, has been covered with about 18 inches of

sandy subsoil dug from the cellars of the large buildings around. By deep trenching I was able to get some of the brown soil on top of the sand.

The man who had the lot last year, planted it, after it had been ploughed and harrowed for him, and then disappeared. So twitch grass, lamb's quarters and pig weed grew very high and thick on the lot. But I had very little difficulty with the weeds, as I hoed and cultivated frequently.

STREET SCRAPINGS.—The lot was ploughed in November, 1916, and harrowed in April, 1917. Not finding any manure in the ground, although the Association usually spreads manure before ploughing, I got in a large load of street scrapings. This was a grave mistake. I found the scrapings from the asphalt pavement so dry and volatile that they could not be handled with a fork. On the other hand, they contained so much felt or fuzz from carpet sweepers that, if placed three inches deep on the soil, the spade would not cut through them in digging, so they had to be put in trenches and covered. All of which took a great deal of time. I found no bad effects from the asphalt dust, oil or gasoline that is usually urged against street scrapings. I found that they had considerable manurial value, as the vegetables grew better where they were. But they cause a dirty, dusty delay, if put on in spring.

DRILLS TWO FEET APART.—I decided to plant in drills running north and south, two feet apart and across the ploughman's furrows. As the lot is open on all sides to the public and there had been a short cut across it for years, I had some difficulty in making my plan. I did not want to tempt the public or attract their attention by putting melons, peas, onions, carrots, corn or squash near the boundaries, so I put potatoes around the outside. This was a mistake, for I got the one vegetable in the shady places that will not grow there.

SEEDS IN HOT BED.—About March 27th I planted the seeds of cabbage, cauliflower, Brussels sprouts, tomatoes and celery in the hot bed. They should have been planted two or three weeks earlier, as they were very small, though vigorous, when I transplanted them to the lot.

In preparing the lot for seeding, sometimes I dug a large patch, but in other cases I just dug a strip 16 inches wide, leaving 8 inches undug between the rows.

ONIONS AND SPINACH.—The first planting on the lot was Dutch onion sets and two kinds of spinach on March 31st. In spite of the cold, raw spring, these kept ahead of several other plantings later on. The last sowing of spinach was about the middle of July. It did not pay, as it produced very few leaves and went to seed at once.

Like everyone else I planted more radishes than we could use, even sowing them on the earth thrown out of the celery ditch. But the green seed pods of radish can be pickled.

PLANTING SEED.—The Association presented me with twelve or fifteen kinds of seed. In addition to these, kind friends gave me little packages of seed, "just to try." So it was not very long before I had a great many little rows planted and began to worry about where I would find room for the potatoes and all those little plants that were coming on in the hot bed.

POTATOES.—I planted some large whole potatoes, some small whole potatoes, and some potato peelings from a quarter to half an inch thick. But mostly I planted them cut up into pieces with two eyes on each. They were all Delawares. Under equal conditions they did equally well. Those in sunshine did much better, and gave more tubers than those growing in partial shade. The drills were two feet

apart and the sets one foot apart in the drills. My neighbor put his three sets to the hill and the hills three feet apart each way. We thought his a little better than mine, as he could hill them higher and from all sides. They should be hilled slightly at the moment of planting. Otherwise you cannot tell where they are and will be afraid to hoe until the potatoes come up, and the weeds will get ahead. I planted potatoes when I could get at it, from May 7th until May 28th. A neighbor across the road got better results by planting a week or ten days earlier. We heard a great deal about blight. My neighbor sprayed with Bordeaux mixture. But we could see no difference. Perhaps none of us had blight.

I picked the striped potato bugs twice and went over the plants again twice and destroyed the patches of yellow eggs. But the pink larvæ with the big appetites finally appeared. So I sprinkled the plants twice with a watering can at an interval of about a week, using half a pound of paris green.



One of Toronto's vacant-lot gardens.

I planted about four pecks of cuttings. I dug about eighteen pecks of potatoes. The average size was about two inches long. Many of them were larger than this, but very many of them were as small as marbles. But I dug them all and find that they can all be used for food.

PEAS.—The trellis for the peas was put up before the peas were planted. I wanted it to act as a hint to the public that the runway diagonally across the lot was temporarily closed. I used three wires, stretched on stakes. Alongside of these I stuck in trimmings from shrubs and tied them to the wires with bits of string and wire dug up out of the lot. I planted the peas on April 17th, too late by ten days, even in such a cold spring. I used Michelmas, Gradus and American Wonder. The Michelmas grew about 20 inches high, the Gradus about 15, and American Wonder only about 6 or 9 inches. American Wonder was only about five days earlier than the others. Each plant of it had from three to seven pods, and each pod had from two to five peas. Some more American Wonder planted on July 5th did exactly the

same, showing that poor ground will produce some peas anyway. Altogether I had twenty-four quarts from a row thirty-six feet long.

The beans were Wardwell's Kidney Wax and the Green Pod. When the pods came on them, I picked them, thinking more pods would come. But they did not. A second planting of beans in late July where the spinach had been, gave but a few pods in late September when stopped by the cold weather. A second planting of beans should have been made about a week or ten days after the first.

LETTUCE.—When the lettuce had leaves about the size of a five cent piece, I noticed that something was nipping them. The dozens of experts who came around to talk whilst I was working attributed this to everything from aphids to rabbits. So I strung some fine black thread over the lettuce. This stopped the sparrows. I afterwards found some rustling paper tassels hung over the lettuce to act better, as they did not interfere with the growth or picking of the lettuce.

CABBAGE AND CAULIFLOWER.—On May 19th I transplanted two kinds of cabbage, two kinds of cauliflower, savoys, red cabbage and Brussels sprouts from the hot bed to the ground. They were very small plants but vigorous. I clipped a small piece off the end of the leaves, so that the plants would offer less resistance to wind and rain. In three days the cut-worms had clipped the rest of the leaves off. I scratched around the roots of the ruined plants, killed the cut-worms, and planted again in the same place. Also I dug up and raked the ground for twenty feet at each end of my lot, so as to kill or expose the cut-worms that breed in such grassy or weedy waste places. In a few days more most of the cabbage family disappeared again and the lettuce too. Again I killed all the cut-worms I could find and filled up the blanks for a third time. Then I mixed up wood ashes, coal ashes, wood soot, coal soot, lime, sulphur and salt, in fact all the certain sure remedies that all the "rail birds" around my lot prescribed. This mixture was placed in a ring around the plants and had some effect in preventing their complete destruction. That is, the cut-worms only bit the tiny heads out of the cauliflowers and left me, all unwitting as I was, to cherish a large number of bouquets of cabbage leaves for the rest of the season. For the fourth time I filled up the blanks, using up the rest of my plants from the hot bed and some savoys a friend gave me. Then I mixed up some bran and water into a thick porridge and put a little golden syrup into it and enough paris green to give it a slightly greenish hue and placed a small spoonful of this close to, but not touching, each plant. I lost no more. But a great many of those that had been bitten, but not killed, produced no heads. However, I had enough cabbages and cauliflowers to make it worth while. The Brussels sprouts had only produced the tiniest sprouts when I had to pull them up on October 22nd to allow the lot to be plowed. I shall not plant them again. My neighbor happened to have a number of pieces of stiff, grey paper, six by eight inches. These he formed into cones or funnels and put them around his cabbage plants, leaving the funnels standing up about four inches out of the ground. He lost very few plants by the cut-worms.

TOMATOES.—The tomatoes I planted were represented to me to be Chalk's Jewel, Earliana and Bonnie Best. And some of them turned out to be the old, wrinkled Ponderosa, which some of my friends aver is the best flavored tomato, even though it looks so badly and is so difficult to skin. The plants were placed two feet apart each way. I staked them, keeping some of them to one stalk and letting others run to four, pinching off the tops of the stalks when the third bunch of fruit was set. I found the single stalk method gave earlier and larger fruits.

but the four stalk method produced a larger, total weight of fruit to the plant. My 30 plants had 48 quarts of ripe tomatoes, or tomatoes that got ripe, and 36 quarts of green tomatoes. I think Bonnie Best the most suitable variety for my lot.

CELERY.—The celery was planted in a trench about 16 inches wide and 12 inches deep, in two rows, plants four inches each way. The plants were very small and the earth without manure. Consequently I dug celery poorer than I would buy. But I have 150 tiny bunches that come in very useful for soups and salads.

CORN.—The corn was Golden Bantam, Black Mexican and Stowell's Evergreen. It was all sown too late, in rows two feet apart. The plants were left some six, some nine and some twelve inches apart in the rows, and some plants were transplanted. I saw no difference in the results. Where the Golden Bantam was really dwarf, it produced three or four small cobs to the plant, each filled with seeds. But many plants of the Golden Bantam were not dwarf. These got stopped with the cold weather and their large cobs did not fill out and were most of them useless. Very late in the season the Black Mexican and Stowell's Evergreen did produce a few tiny cobs that were beautifully flavored. But Golden Bantam did much the best with my late planting and poor soil.

PLANTING IN SHADE.—I had two kinds of Swiss Chard. The leaves of this, used as greens, are not as good as spinach. And the stalks boiled are not as good as celery boiled. But for me it was the best vegetable on the lot, as it came into use in July and lasted until the middle of October. Even then, pulled up, and placed on end in a box it kept quite fresh for four weeks. At the beginning of the season I used to pick the outside leaves off very carefully. But, later on, I just cut the whole plant off with the shears, and in a week or ten days it was putting up more leaves. It grew as well in partial shade, almost, as in the sun. Carrots, 3 kinds, beets, 2 kinds, parsnips, radishes and lettuce did well enough in partial shade. But turnips, onions, both from sets and from seed, leeks, salsify, and particularly potatoes were very poor on the shaded parts of the lot.

There were also broad Windsor beans, 20 plants of sage from seed and too much cress.

PLANT FEWER KINDS.—From my experience of this year, and keeping in view that greater production for which the vegetable campaign was launched last spring, my intentions are next year to plant half the sunny part of the lot with potatoes, 3 sets to the hill and the hills three feet apart each way; to start Bonnie Best tomatoes, celery, cauliflower, lettuce and radishes as early as March 5th in the hot bed; to use onion sets for early planting and Yellow Danvers for seed, Chantenay Half Long or Oxheart carrots, Egyptian Flat or Globe beets, Hollow Crown parsnips, Golden Bantam corn, Wardwell's Kidney Wax beans, Swiss chard, Swede turnips, and, if possible, a few Hubbard squash. I may plant some American Wonder peas, as a luxury.

TIME TAKEN.—From the first digging on March 31st until I picked the last of the sunflower seeds, turnips and chard on October 22nd, I worked 180 hours on the lot. This is 22½ eight hour days, or one hour every work day during the season. The value of my crop was \$26.60.

EVERY MAN'S DUTY.—In speaking of the past summer's efforts, I have heard many Vacant Lot Gardeners enlarge upon the fact that their minds were soothed by the work. When I came in from my Vacant Lot and in my own garden passed budded lilacs running to a forest of suckers, precious peonies lost in a jungle of delphiniums and beautiful spreads of climbing roses ablaze with flowers even

then against a background of brown, thrip-riddled leaves, the joys of the Vacant Lot Garden did not soothe my mind. It was only duty.

KEEP A DIARY.—Another favorite statement of the Vacant Lot Gardener is that, by smoking a pipe on the lot of evenings and now and again remembering to take a hoe with him—not that it was necessary, you know, but just to dress the part—he obtained ever so many baskets of all sorts of vegetables for his own large family and for the families of all his relations, not to mention the bushels of this and that that were given to all the neighbors on his street and, of course, paying no attention to the bags and bags (or was it tons?) that the lazy people in the block behind stole from that lot. To enthusiasm of this kind I regret that I cannot treat you. I kept a diary. In it were written down each day what I



Italian children doing their part at Hamilton.

did on that lot and the value of what I picked. Such a diary is a wonderful curb on the flights of the imagination. But I am going on with that same lot next year.

E. E. KILMER: When we were urged to grow and produce more vegetables in Brantford this year, we formed a Thrift League in which the Horticultural Society was largely represented. We had not the same difficulties that our friend Mr. Dockray had, but we had them, more particularly with the sod. Those of you who are familiar with the geology of this country will know that where Brantford is situated there has been great glacial action in the days gone by, so that our soil consists mostly of glacial drift, gravel in some cases, sand in others.

The City Council gave us considerable assistance in the fact that they paid for all the plowing that was done, and every individual receiving a lot was assessed \$1 towards repaying for plowing and fertilizing. However, we had the same

experience that our friend Dockray had and there was very little fertilizing done. The cultivation was principally plowing, some very crude. Those who could not wait used the spade, which is one of the best methods of cultivating your garden if you have any skill in using it. I used it because the fences were so close you could not use a plow. The methods we used were somewhat different from our friend's.

It was enjoyable work. Many a man from Brantford saw the sun rise for the first time in his life when he was wending his way down the street to the lot he was working. Where we could not get large lots, we got small ones. Our committee visited every house in Brantford I think. I represented Ward 5 or one-half of it at least, and I can swear that I visited with the assistance of some of my teachers who were interested in the work, every house there in that half of the ward, and there are 845 houses by actual count. We asked whether they had ever gardened before, what success they had had: if they had never gardened before would they undertake to do so now. We explained the terms on which plowing was done for them and made a record of all those details which it is unnecessary for me to furnish this afternoon.

In order for me to give you a sort of comprehensive idea of the amount of work we did, I have reduced my remarks to a lot of definite size. I am going to assume for the purpose of my remarks that the lot constitutes 50 feet by 50 feet, or 2,500 square feet. From the records of the committee we had under cultivation approximately 3,000 lots. Some men of course cultivated three or four apiece, others only one. Some were adjacent to the house, others at remote distances, some on lots that had never been cultivated for twenty years. We worked early and late. We developed blisters in large numbers. We developed headaches sometimes too, and backaches, but the greatest gift I derived from my year's work was that of perseverance, and I am satisfied that what we will beat the enemy with in this present great struggle is this same perseverance which some of us have developed in this increased garden production of 1917. If I am spared to see the spring of 1918 I am going to be on the land again.

If there is one particular thing that I think will win me a place beside the soldier who has made the supreme sacrifice, in the life to come, it will be because I have obliterated twitch grass. The lot which I was working could not have been more thoroughly impregnated with this pest. I started out to dig it out, to cultivate it so to speak. I was told to keep digging it. I hoed it, chopped it, and spaded it, and began to weary of the work, because every time that the spade went down I landed two plants of twitch grass in place of one. I resolved to use the hand cultivator. I set to work with this instrument and I dug up to a depth of 12 or 15 inches, perhaps 2 sq. yards of this lot. I went on my knees, and I can tell you the prayer that went up to the Almighty is not recorded on the phonograph. I picked it out by the basketful. I carried it away by the wheelbarrowful. However, half of that lot is now free from twitch grass, and if I am spared the next year I am satisfied that the remaining half will be free of it. That is the greatest benefit that I have got from Vacant Lot gardening this year. I would not be afraid to tackle any other job after my experience with that twitch grass. Ultimately I got the land in a condition to plant. I did not plant the variety of stuff that our friend did, but I sowed beets, carrots, parsnips, turnips, lettuce, beans—two varieties, white and wax—potatoes, cabbages, both early and late and red cabbage as well, cucumbers, radishes, squash and corn. I kept a careful record of what those lots produced.

I cultivated two lots of the size above named and I raised \$28.50 of produce from those lots. I paid \$1 for plowing and \$2.50 for seed or plants, and spent a total of \$3.50, so that I had \$25 of a net return from my work, and upon that basis I discovered the fact that I earned from the land a half cent per square foot. I am not going to tell you the amount of time I spent cultivating that land because I am not a lawyer, and I might have considerable difficulty in establishing my veracity, but the time that I spent puts his 22 days decidedly in the shade. I spent more time than that, but I am glad I did so, and I am satisfied of one thing, that is, if this country is going to win the war more people have got to cultivate the land than cultivated it of recent years, they must till it more thoroughly. Now, if I am spared to cultivate that land next year I will get more than \$25 from it. Moreover this year I was led to believe the land was fertilized; it was not. If I am spared next year I am going to see that it is fertilized. I found a great many people who got more last year than I did, some who got less. I had the same difficulty as Mr. Dockray had with the cut-worm. I did not go through the preparation of as many preventives. I was fortunate to fall in with a man who suggested the paper idea to me. I was fortunate in getting information earlier than he did in the destruction of the cabbage moth, too. I used paris green and only grew one variety of corn. I think our friend Dockray will have learned that you can't get much in the shape of cobs on corn that is grown in gravel. One thing that I learned, you can't grow as much corn in an area of ground as you might like to. We had corn on a property on which there were 48 or 50 others working and corn closer than our friend Dockray had and we had success. One theory I am satisfied with, you have got to give corn room. The most profitable of my crops were tomatoes, cabbages and cucumbers. I had really good crops so far as these are concerned. I have some of these in my cellar now which will carry me until the end of this year at least. There is one thing that our societies can do for the benefit of this country, that is to urge increased production.

MR. DOCKRAY: A word of explanation as to how I could work so long on the lot. There is a moving picture theatre next door. Under our by-laws they have to keep above their side door a good light, although the people come out into the lane, and they chose to put an electric light of very strong power there, so that I can work on my lot until 10.30 at night.

DR. BENNETT: A great many have mentioned lack of fertilizer. I believe one of the members has a resolution to the effect that something be done along the line of conserving street sweepings and leaves for this purpose.

Moved by J. A. TAYLOR, St. Thomas, seconded by E. E. KILMER, "That the members of this Horticultural Association invite the co-operation of their local Horticultural Societies in requesting their municipal councils to conserve the sweepings of the streets and leaves." Carried.

A MEMBER: In the City of Ottawa as in other cities, the Boards of Health insist on manure being carted away to a remote part of the city, and then placed at the disposal of our Horticultural Society and Vacant Lot Association, but the cost of transporting the manure from the dump to the gardening areas was so great that our finances could not stand it. We now have a committee delegated to the city council to see if we cannot have manure deposited in different parts of the city, possibly in the areas themselves, so that the lot holders can go and be supplied with the manure.

DR. BENNETT stated that their society this year had saved some 100 loads of leaves, which when they are properly rotted are a splendid fertilizer.

MR. WILSON here remarked that he supposed there were more trees in Toronto than any other city in Canada, that last summer trees were heavily laden with leaves, hundreds of loads fell in the fall and when the rains came on they were packed along the streets in good shape, thousands of loads were drawn away and put into the dump, and the citizens along Huron Street where he lives were paying \$3.50 a load for manure. Leaf mold makes the finest fertilizer for garden plots than can be obtained.

A MEMBER: I think peelings of oranges, lemons, pineapples, and all sorts of vegetable matter which are dumped and carted away should be put in a bag or box of some kind. Allowed to decay and mixed with earth, they make a fine fertilizer.



St. Giles' Home Garden Club's exhibit, Hamilton, Ont.

J. LOCKIE WILSON: In the City of Denver hundreds of thousands of dollars are paid to the city for this garbage. All the city of Toronto would need to handle this would be a separate receptacle for this class of garbage. We have 500,000 people in our city, there would be 100,000 families, and I have estimated that there would be enough of this garbage with the addition of some shorts to feed at least 40,000 hogs annually. Four or five weeks' old hogs could be purchased at \$1 apiece, fed on selected garbage and sold when six months old and weighing 150 lbs. for 15c. a pound, making a total of 6,000,000 pounds of pork for \$900,000. Allowing for expenses and other necessary foods such as shorts, there would still be a large profit to the credit of the municipality. The unbusinesslike methods of many of the city fathers of this country in throwing away hundreds of thousands of dollars every year is simply wasting much valuable material both for fertilizer and food products.

H. J. MOORE: I have listened with a good deal of interest to all that has been said about conservation of manure in the way of leaves and other things. All the garbage that goes from my house is buried in my garden. I make a trench and bury it all; in the fall of the year I open a trench large enough to contain all the garbage that goes from the house all winter. In the spring that is covered up, and instead of it going to the pigs, I grow food there. The superintendent's suggestion that we feed pigs is an excellent one, provided that the garbage is very carefully separated and boiled before fed. I know of one farm where the hogs were fed from the garbage and in some cases disease developed, thus rendering the meat unfit for human consumption; but with a little care I should think considerable feed could be saved for the hogs. There is a company in Niagara Falls who operate right along this line, making a product which is shipped without reserve to the United States through large concerns who handle it in a wholesale way. They have the proper facilities for mixing it with fertilizers. It seems to me that a product that is manufactured on Canadian soil, if it is so much needed, should be retained here and utilized. Let this Association get busy, make a request to the Company to let you have a certain amount of this fertilizer, and so replace a lot of this garbage and leaves and other materials that have been wasted. I spoke to the superintendent of the plant and he told me that if certain bodies would make a request to the directors of the plant, they would consider them and it would probably be possible for each of our societies to get a certain number of tons.

THE INFLUENCE OF SCHOOL GARDENS ON COMMUNITY.

J. A. TAYLOR, B.A., ST. THOMAS.

School gardens concern particularly one of our best assets—the rising generation. There never was a time in the history of the human race when such a premium was placed upon child life as now. It is our children who will have to meet the frightful economic conditions created by this war, and it is on their shoulders as well as ours that the war burden will fall. They are the trustees of posterity, and we should remove every handicap that hinders their physical, mental and moral development. The school garden helps to furnish an environment in which their characters are to develop and grow. Environment forms a large amount of life's course of study, and its enrichment makes noble tastes, refined ideas, elevated thoughts and lofty ideals, and sweetness of soul. A beautiful environment of flowers helps to correct the demoralizing tendencies of war and the battlefield. No one is unconscious of the soothing, soul-inspiring presence of flowers in the sick room and the death chamber. They grow as sweetly and in as great profusion over the grave of the poor as over the last resting place of the rich. They symbolize purity, beauty, innocence, sweetness, modesty, resignation and immortality. They are an imperishable type of evanescence. "To me," says Wordsworth, "the meanest flower that grows contains thoughts that lie too deep for tears." Later in life's journey when uttering regrets that his earlier life was not spent more in contact with nature, he says, "Nothing can bring back the hour of beauty in the grass and glory in the flower." The shrieking shrapnel, the roaring cannon and the bursting shell chant the glorious requiem of Canada's fallen heroes and noble dead. The simple crosses and the beautiful poppies which

grow over their graves proclaim alike the eternal verities for which they died, and whisper accents of rest and immortality. What soul has not had his patriotism quickened, refined, ennobled and inspired as he reads the beautiful and touching poem "In Flanders Fields."

In Flanders fields the poppies grow
Between the crosses, row by row,
That mark the place; and in the sky
The larks, still bravely singing, fly,
Scarce heard amid the guns below.

We are the dead. Short days ago,
We lived, felt dawn, saw sunset glow,
Loved and were loved; and now we lie
In Flanders fields.

Take up our quarrel with the foe!
To you from failing hands we throw,
The torch; be yours to hold it high,
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields.

The function of the school is to prepare for complete living and the duties of citizenship. It is to give that education which equips one for life's duties, responsibilities and opportunities.

Mrs. CADWELL: Nothing has ever given me so much pleasure as seeing the children in the gardens. The chairman of the Windsor School Board and I were given the fund for this purpose. We had 310 children enrolled in these gardens. There has been much said about poor soil. We had that to contend with. The ground had not been plowed for three years. In many cases it was very discouraging and uphill work, but many of them made a very good success of it. I will read you two letters from children that impressed me very much, the first from a little girl of ten:

MY GARDEN FOR 1917.

First there was my seed which I got from the penny packets given me by the Horticultural Society. I then made a small bed of rich earth to sow my seeds in, and, when they came up to nice-sized plants, I planted them in my regular garden which was made while my seed was growing in it. I planted zinnias, asters, snap-dragon, also dahlia roots. They all grew to be very fine plants. I watched them and kept the weeds out by hoeing. They showed a lot of pretty flowers which I sold a great many of. This garden of which I have spoken is my home garden.

I also had a small plot in the reservoir garden. I grew in it vegetables, such as radishes, beets, carrots, onions, beans, tomatoes and turnips; all of which grew very nicely. Some of my vegetables I canned after having been shown the way to do them and took them to the Windsor Fair, and got a first prize of \$3 for 1917.

RUTH THREAPLETON.

The other is from a very little boy.

MY GARDEN.

In the fall of the year I got some sand, manure and leaf-mould. I scattered this over my garden.

Next spring, about May, I dug this in and mixed it up good. In two days I raked it and planted my seeds, getting the rows straight. I planted parsley on the edge, then radishes, lettuce, carrots and beets in the next bed, beans, cabbage, cauliflowers, herbs and tomatoes. After the lettuce was used I planted onions. The radishes and lettuce were the first things ready and in a few weeks everything was coming along fine.

On Saturday I loaded up my little wagon and took it to market, and would come home with a dollar or a dollar and a half. I also sold things during the week. Through the year I realized about \$10 or \$15 besides my prize at the Windsor Fair.

KENNETH THREAPLETON.

Speaking of the children bringing this garden work home, one little boy said to his teacher that he would like some seeds; he got them and took them home; said nothing to his parents, but looked about and the only earth to place them in was the ashpile. He planted his seeds in the ashpile. Later his teacher questioned him, and the garden teacher went to his home. She saw the mother who said he had no ground to put the seeds in, and they found out that the seeds were put in the ashpile. The teacher then enrolled him in one of the gardens. At the end of the season he got a prize, 75 cents. They sent it to him in the form of a cheque, which the parents had framed, the father saying if they cashed it for him the money would be gone, but they could show the framed cheque to their friends.

The Garden School is a great educational and social power for the physical, mental and moral growth of the child. We are just beginning to realize that the greatest asset of our nation is our children, and that every child in Canada has a right to start the race even, without being handicapped. The garden develops in the child a civic pride and love for the beautiful, resulting in a



Sowing seeds in a school garden.

greater respect for the appearance of public property and an improvement of home surroundings, and it also proves a wholesome form of recreation and an opportunity to acquire a knowledge of the phenomena and forces of Nature, the possession of which makes life fuller and richer. Since every home does not provide these pleasures, the school can be a valuable substitute, bringing the child in close contact with the things it loves, at least a portion of the day for the greater number of days during the year when his life is being moulded. If agricultural education is worth while adopting, and we are sure it is, therefore to dignify it and give it its proper force, it should be included in the curriculum with the other studies. Were a kind fairy to suggest that I might have one wish granted, it would be that I would like to see every child given an opportunity to have flowers, birds and animals, a place in which to play, a garden in which to work and something all his own to love.

C. B. HAMILTON: Mrs. Cadwell has covered the ground most fully in regard to the necessity of the schools taking up the question of horticulture or agriculture. As I stated here last year, the Ontario Board of Education altered the

law, eliminating the words "Rural or Village" so that the benefits of the million dollars odd money to be distributed this year and for the succeeding years until 1923 could be devoted to city or town schools as well. Heretofore it had only been given to country schools—rural or village. I followed up that question and we tried to have our school board take hold of the matter. I am a member of what is called here in Toronto "The Home and School Council"—that represents the teachers and the parents trying to get in sympathy with one another, to promote in the home whatever is the most benefit to the child. We have on our School Board two ladies, one of whom is president of this Home and School Board, and is very interested and active in promoting the cause of gardening, manual work, nature study and all of the things tending to develop the child along these lines. She made a motion before the board, that the teachers should have the opportunity of attending the classes held each July in Guelph where they have to obtain certificates before they could receive the fullest benefit from the fund provided. The School Management Committee referred that to the inspector. His report was that it was not desirable. She then made another motion. The drift of it was that if they would encourage the teachers to feel that they could share in this fund by knowing that if they did qualify they had something to work for. They also turned that down. The thrift scheme which has been growing so strongly in Toronto this year had its effect in the schools. The parents taking up the Vacant Lot scheme got the children to do likewise. I was asked to judge in five different schools what the children had grown without any encouragement whatever. In two other schools I was asked to see their gardens, who had the best plots for prizes they had to offer. Whatever may be the outcome of school children's work, unless it is on the curriculum and as a study, and unless the teachers can be interested in that study, I feel nothing can come out of it, and it will just drag along year after year with no advancement, whereas if there was some stimulant which would make children and parents take a greater interest, the work would gain in quality and scope, because the parents are as interested as the children. I have delivered several lectures which were well received, but it was only just explaining things that we all know more or less, but which were totally strange to them. I feel that the Government have made a very great move toward the benefit of the school garden in altering that Act, and it is really too bad if the school boards will not take up the matter energetically and enable their teachers to qualify and thus act as an encouragement to the children.

R. B. WHYTE: All that Mr. Hamilton and Mrs. Cadwell have said, I agree with. It is impossible to overrate the benefit of school gardens. The Ottawa School Board put in operation a scheme which is perfectly feasible. They started in every school in the city a Garden Club, which was limited to 35 members. One teacher in each school has charge of the club and she had the assistance of a member of the Horticultural Society. As a rule, there was one adviser to each group of schools. The schools were visited by the adviser and by the teacher. She gave her time outside of school hours. The lots were limited to 18 by 10 feet. In my case we went around to the pupils and ascertained if they had a chance in the competition. If they did not, we told them so and advised them not to enter. The result is exceedingly satisfying, so much so that the scheme is to be carried on next year. The Board held a meeting a few weeks ago and suggestions were made which we think will help very much, and it is very gratifying to feel the interest that the families took and the tremendous

returns they got from their gardens. In one instance it was quite pathetic to see the mother and the child, who had grown tomatoes which were to be sent over to the husband and brother at the front. The whole secret of the success of the school garden rests with the school board and then on the teacher. Of course Ottawa has so many members to draw upon it is easy to get the expert advice that is necessary.

E. E. KILMER: I want to emphasize one point, the influence of the school gardens as a means of preventing migration from the rural sections to the city. I have gardens in my school this year and I have had school fairs, and I defy any man in our city to be elected to the school board who does not come across to the support of the school garden and also with a little cash. I would like to see a man on our school board who opposes school gardens and school fairs. The school trustees all come around to our fairs and contribute too! Another thing, I do not know of any greater influence to prevent people moving cityward. The one person to whom my sympathy goes out is the woman, and there are so many of them, working laboriously on farms among surroundings that are anything but pleasant. There is no farmer who cannot have his little flower beds, and they add so much to the comfort of the women. I have some idea of the work women do on the farm because I was brought up there myself. The surroundings are barren and desolate, and I can easily conceive why a woman should wish to move to the city where there are parks and beautiful surroundings. I also endorse all that Mr. Taylor said about the cat. I would just like to intimate to Mr. Taylor, if he has any language he would not like to express he might have it written up in Indian. That is one advantage of living in Brantford.

MISS BLACKLOCK: I like justice, and I think you are rather hard on the cat. Puss has her uses, and one of them is, she is a great help to the farmer in keeping down mice. I have a cat, and I would not be without one for anything, just as a scavenger as far as mice are concerned. Mice do more damage on the farm than the ordinary mortal has any idea of. My cat will bring in three or four mice, yes, a dozen, to every bird she catches, and then it is generally a sparrow. She is a discriminating cat. There is not a doubt about it, that the cat has its uses, and I don't think these gentlemen have lived in sufficiently rural districts to appreciate the cat. No farmer will be without two or three of them on his farm, so do not abuse the cat too much.

J. A. WEBBER, Hamilton, here read an invitation from J. L. Brunton, Secretary of the Board of Trade, Hamilton, asking the Ontario Horticultural Society to meet in Hamilton next year, and Mr. Webber added, "I hope that his expectations will be realized and I desire to extend a hearty invitation from the Hamilton Horticultural Society. As we have been meeting here for some years in succession, a change around will be all the better for the members. When we come to the problem of transportation, it is only forty miles from Toronto to Hamilton, and I do not think it would present any obstacles in that direction. It may not be generally known here that Hamilton with its population of 180,000 has the largest tonnage in and out of any other place but Montreal, in the Dominion. Some of our industries there are the greatest on the continent, and outside of horticulture there would be many things that would be of interest to the members. I hope some action will be taken with a view to passing these conventions around.

The Chairman said Mr. Wilson had two telegrams along the same line, one from the Board of Trade, the other from the Mayor of Hamilton, and it was their intention to take this up the next day after the election of officers.

MRS. CADWELL: I was wondering if the Horticultural Societies were not big and broad enough to take up this question of the school garden, and see if we could not have that one little link fixed up and have it put on the curriculum.

DR. BENNETT: It is optional now, but we might make it compulsory. If this nation is going to succeed, Horticulture is going to be the success. We are all of one mind on that.

MRS. CADWELL: If the other teachers are too busy to teach this subject, why not hire one to make the rounds in a number of schools.

LETTER FROM AMERICAN CIVIC ASSOCIATION.

"DEAR MR. WILSON:

"I am in receipt of the programme for the Twelfth Annual Convention of the Ontario Horticultural Association, to occur November 21st and 22nd, in Toronto. I earnestly wish I might be able to be present, at least on one of these days, but inasmuch as it is necessary for me to be in Detroit on both days, in attendance upon the convention of the National Municipal League, of which I am a vice-president, I must deprive myself of the benefit and pleasure of meeting with the earnest and active workers in horticulture and civic advance of Ontario.

"In these days when all of us must think every day and every hour of the necessity for winning the war which is to make the world safe for democracy, and to remove, we hope for ever, the menace of a false civilization and an unfair commercialism as included under the forms of German autocracy, it is not to be wondered at that we lose sight of certain essential things which are of scarcely less importance than the prosecution of the war.

"I have above quoted President Wilson's sententious utterance concerning democracy. I now quote another of his utterances of equal prominence. The President has said, '*The war must not destroy civic efficiency*,' and I particularly ask that as the greeting of the American Civic Association to your very important organization in Canada you present these words.

"The men of Canada and the United States who are on the firing line and in the trenches are and must continue to be sustained from home. They have offered themselves fully and completely in our defence. They are the first answer to the plain question before every American, whether living north or south of the Great Lakes, as to whether he would prefer to defend his country against the Huns on this continent or on the continent of Europe.

"But these brave men who represent us, and who as they have gone to France from Canada have given to that great land imperishable renown by reason of their devotion and bravery, are fighting for a principle which it is our solemn duty at home, not only to keep alive, but to keep in efficient operation.

"If, then, we are earnestly and honestly back of the men who are fighting to defend us and our homes, we must maintain to the utmost the ideals of civic efficiency, despite the attractions and the drawings of the service abroad. Our homes must be clean and our streets must be kept so that we are proud of them. Our towns must reflect our ideals of good order and social justice, not only in the home surroundings but in the street furnishings, in the placing and adorning of public buildings, and in everything that will definitely increase the working efficiency of those of us who must produce here in order that our brave soldiers may fight in France.

"In the early days of the war there were not wanting those who thought that all interest in anything but gas bombs, fighting appliances and Red Cross work was disloyal. The suggestion was made that the rose gardens be plowed up, and actually beautiful lawns, helpful and restful to the eye, were plowed up to grow potatoes!

"It has needed the lessons from the trenches in France to convince us of the folly, indeed the hysteria, of this attitude. When our soldiers are off the dreadful duty of the actual firing line it is found they regain poise, efficiency and strength much more rapidly when they come in contact with flowers, pictures and music.

"In the same fashion it is apparent that this is not the time to make less beautiful the surroundings of our homes, to have less pleasing the environs of our cities and towns, but on the contrary that it is the time of all times for these two great countries who are united in the effort to awaken the world from a terrible nightmare to make their own workers, men and women, boys and girls, better, happier, stronger and more definitely efficient by the carrying on at home of everything that will contribute to the great ideals we all hold.

"In a singular way the Ontario Horticultural Association, with its admirable organization and its broad reach, stands in shape, not only to maintain, but advance these high ideals, and I can wish nothing better for the whole land than the rapid extension of its good and great work.

"I note that in your afternoon session of November 21st a space has been allowed for the report of delegates to the American Civic Association's convention, held late in October in St. Louis. There were not, I believe, any delegates present, but we had the honor to read to our important gathering your fine words of greeting. I have thought that perhaps in lieu of this report you might care to read these words to the assembled convention, and to say that the keynote of our own convention was the carrying out of President Wilson's memorable utterance that 'the war must not destroy civic efficiency.'

"Yours truly,

"J. HORACE MCFARLAND,

"President."

J. Lockie Wilson, Ontario Horticultural Association,
Toronto, Ontario.

REPORT OF DELEGATES TO AMERICAN CIVIC ASSOCIATION.

REV. G. W. TEBBS, HAMILTON.

Your delegates to the American Civic Association held at Washington, D.C., on December 13, 14, 15, 1916, were Messrs. Bennett, of Barrie, Rev. G. W. Tebbs, Hamilton, and J. Lockie Wilson, Superintendent of this Association: and all were present at the convention. There is but little doubt that the reason why the United States eventually entered the war was due to the fact that our genial Superintendent presented the Allies' cause with great vigor from the moment we reached American soil to the hour of our return, to every American citizen he met and also in his address before the convention.

The programme was a very excellent one, dealing with the following subjects: Greetings from many Societies related to civic advance, your Superintendent on behalf of this Association conveying your greetings; Schools as Community Centres, the chair being taken by Miss Margaret Woodrow Wilson; Country Planning and the Preservation of National Scenic Possessions, as well as providing for the housing of industrial populations. In the election of officers, J. Lockie Wilson was elected as Vice-President and Rev. G. W. Tebbs a member of the Executive Board of the American Civic Association.

Through the courtesy of the late William B. Howland, who was also a Senator of the United States Congress, your delegates were introduced to Speaker Champ Clark at the Capitol and were privileged to occupy places in his private gallery to witness the opening of the House of Congress and to listen to one of the debates. Your delegates feel the importance of the affiliation of the Ontario Association with the American Civic Association in meeting the foremost leaders of civic advance on the continent, and in the acquisition of information of the utmost value to the members of this Association.

THE PLANNING OF GROUNDS FOR CITY, SUBURBAN AND COUNTRY HOUSES.

H. B. DUNINGTON-GRUBB, TORONTO.

While war days are not the time for the building of houses and the laying out of grounds, one may safely assume that the making of plans for the future and the starting of permanent plantations which will be growing up during this period of waiting is legitimate.

Many of us have pieces of property of one sort or another from the development of which we hope to derive much pleasure upon the conclusion of peace. Now is the time for us to be preparing our plans. All of these properties vary. We cannot wait till the last minute and then copy what somebody else has done. As the property is different from every other, so must the plan be different from every other. Apart from variations in topography, natural features, and orientation, etc., properties may vary as follows:

1. The city lot.
2. The suburban property.
3. The country home.

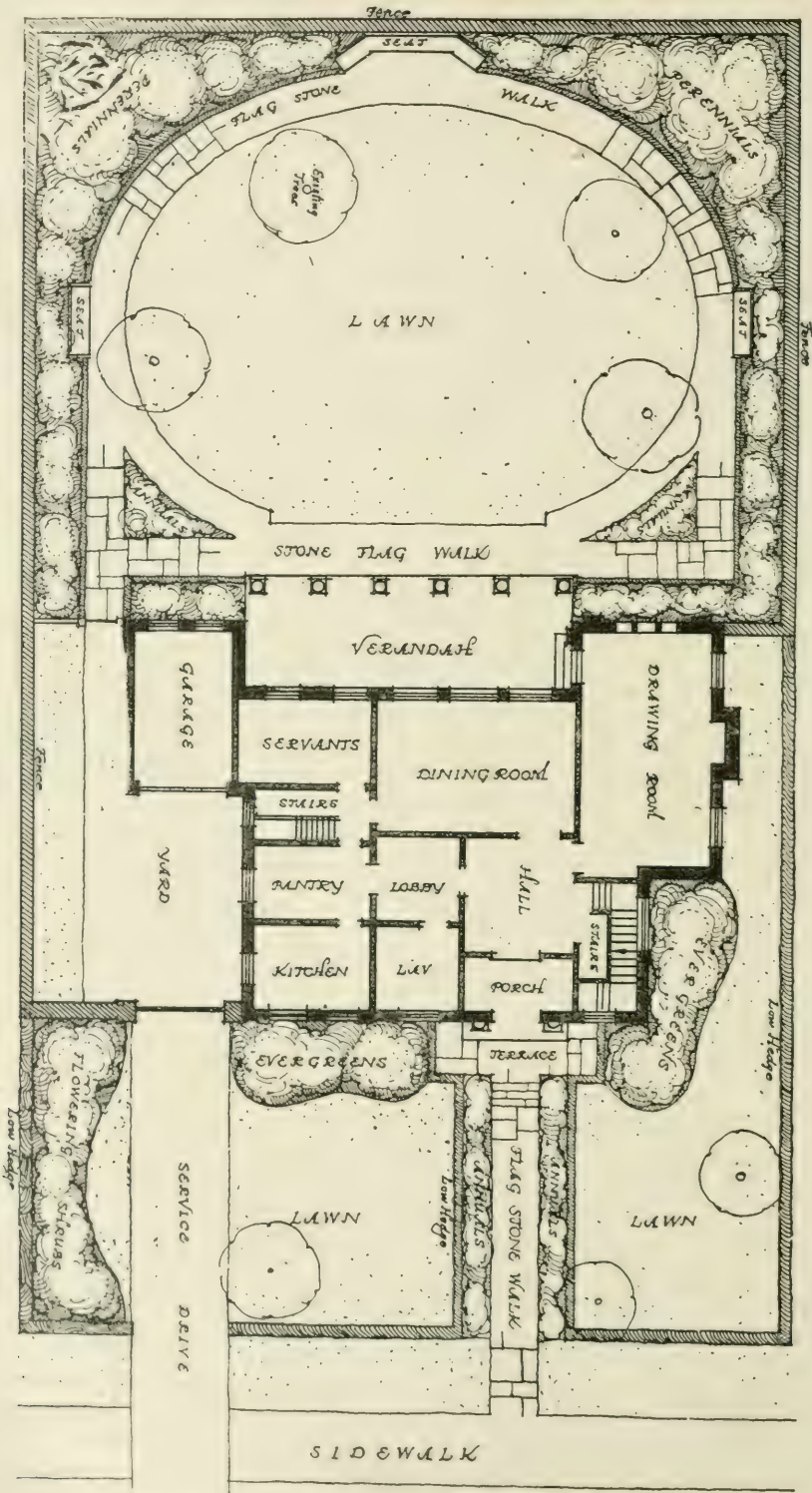
Each one of the above groups may be subdivided as follows:

1. Undeveloped property on which both house and grounds have to be planned.
2. Property on which the house is already built, but grounds are to be laid out.
3. Property on which alterations and additions are required although both house and grounds are already completed.

THE LOCATION OF THE HOUSE.

When arranging for location the following points should be kept in mind:

1. Do not place the house in the middle of the lot, as an extravagant subdivision of the land will result. The property will be cut up into three or four small sections and will appear smaller than it really is. Place the house either to one side or the other according to orientation.



Plan for house and grounds, utilizing existing trees.

2. Arrange kitchens, offices, garage, service entrance, etc., if possible, on the north-east, but always on the side of the house adjacent to the boundary.

3. Arrange the best rooms in such a way as to command the lawn and the best part of the grounds.

4. People using the grounds should be neither overlooked nor overheard by servants in the kitchen.

5. Visitors calling at the house should have a suitable approach from the front door to the gardens without going through the house or pushing between ash barrels.

LAYOUT OF THE GROUNDS.

These should be roughly divided into sections as follows:

1. Entrance area: Driveway, front lawn, etc.
2. Service area: Service court, drying yard, garage, etc.
3. Pleasure grounds: Private lawn, flower gardens, etc.
4. Recreation area: Tennis courts, bowling greens, etc.
5. Domestic grounds: Kitchen garden, fruit garden, etc.

The entrance area should be developed with the following points in view:

1. An easy and obvious approach to the house.
2. A dignified setting for the building.
3. The attractiveness and beauty of the public thoroughfare.

The service area will be planned chiefly for economy of space and convenience.

The pleasure grounds are the most important part of the scheme and should therefore receive most study. The following considerations are amongst the most important:

1. An appearance of breadth and space as seen from the house. This will be usually secured by means of an ample lawn on which plantations are kept chiefly to the boundaries. In spite of this principle the skilful planner will often succeed in increasing the apparent extent of the estate by partial barriers which will suggest extensive grounds beyond.

2. An arrangement of plantations by which unsightly objects will be screened out and the eye directed to features in the landscape of natural beauty, often giving the suggestion that they are part of the property.

3. Flower gardens either formal or informal should never be placed in the middle of a lawn, as they will not only interfere with its restfulness but will also reduce its apparent size. When so placed they invariably look forced and artificial. Flower gardens should always be located in such a way as to give the appearance of falling naturally into place with well defined boundaries. They should usually be given direct connection with the house.

The recreation area should always be set apart if space permits. Tennis courts are always unsightly as the netting obstructs the view. They should be located either beyond or to one side of the pleasure grounds proper.

The kitchen garden should be located in such a way as to be partially screened, but at the same time it should have easy access both from the kitchens and also from the pleasure grounds. Kitchen gardens are usually laid out in rectangular blocks divided by gravel or grass walks. A well defined boundary, such as a hedge, fence or wall is most important.

Greenhouses for cut flowers, fruit, propagating, etc., are usually located either in, or adjacent to, the kitchen garden. Conservatories, on the other hand, should

have direct connection with the best rooms of the house, but should, at the same time, be screened as much as possible from the grounds.

The application of the various principles enumerated above to a specific site is the practice of landscape design. Herein lies its difficulty, its fascinating possibilities and its danger. The amateur who experiences doubt, uncertainty, and difficulty, has taken the first step towards a grasp of his problem. It is partly the experience gained by appreciation of his own and other peoples' mistakes which gradually produces the professional designer. The amateur will usually save himself disappointment by conference with those who have devoted their lives to the study of this art.

A motion of thanks of the convention to Mr. Grubb for his very interesting address was carried.

ASTER GROWING.

G. H. RYERSON, BRANTFORD.

For the sake of convenience I shall divide my remarks into three sections:

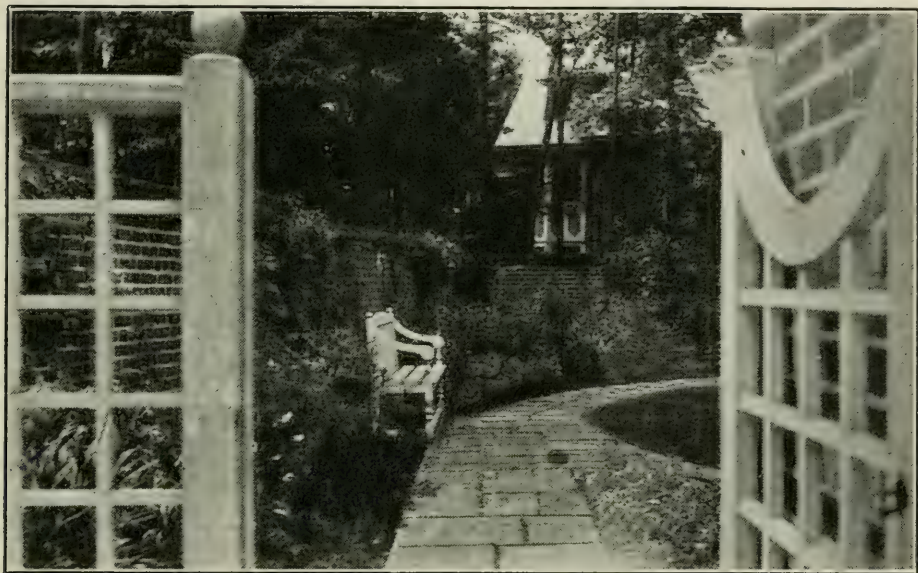
First—The seed.

Second—The seedlings.

Third—The care and attention of your plants after being placed in the garden.

SEED.—Your success as an aster grower will materially depend upon the quality of the seed which you use, and quality being largely a matter of parentage, it necessarily follows that in order to have good bloom your seed must be produced from flowers as near perfect as possible, for without good seed you cannot hope to produce good flowers. No matter how much care and attention you may lavish upon plants from poor seed, you will at best be only able to produce poor flowers. I shall endeavour to point out a method by which each may secure a strain of seed, such as no commercial seed house can furnish you with. It must be evident to all that no seed producer can afford to go over his crop and select seed from only the perfect flowers. He will do this for his own use, in order to keep his stock up to the standard. The labor involved, the small return in seed, and the comparatively low market price of aster seed would render this proceeding a very unprofitable one. For the general trade, therefore, he must harvest his crop as it stands, good, bad, and indifferent. The result is that the seed which you procure through the regular channel will be good, bad, and indifferent, and the flowers produced would also be the same, for like produces like. What you must do is to secure plants from your local market gardener or florist, or seed from a reliable seed house, start your plants in a manner which I shall describe in the second section, and handle them in a manner which will be described in the third section. When your flowers are in full bloom, go over your beds carefully, select several of your very best blooms of each variety, tie a tag to each, giving name of variety and any other remark which you may deem necessary, and break off all flowers not tagged on each plant selected. When your flowers begin to wither, pull your selected plants up, root and all, hang them in a cool, dry place, but free from frost, and there the seed will ripen to the best advantage. During the winter, at any odd, leisure hours, you may clean your seed. Never bring from your storeroom more than one variety into the house at the same time, so as to avoid any possibility of your varieties be-

coming mixed. Break off a ripened flower head, carefully remove the dried petals, which you will find will come away readily, brush the seed from the peduncle into the palm of the hand, place the hands together and rub vigorously with a circular motion, then open the hand containing the seed and blow gently, when you will find that the hair-like appendages which were attached to the seed, as well as light, immature seed, will be blown away, and you will have left in the palm of your hand nothing but plump, mature seed. Place these in a small envelope, a church collection envelope will do, if nothing else is handy, and label properly. You are now ready to start in the aster business in earnest. This method of selecting seed should be followed year by year, and the quality of your flowers will constantly improve.



Side entrance gate in harmony with surroundings.

SEEDLINGS.—There are two methods by which you may secure plants. You may grow them yourself, or you may hand your seed over to a reliable market gardener or florist and let him start them for you. The latter method is by far the most satisfactory, as the price charged is usually very reasonable, and the conditions under which the plants are started are much better than those to be found in the ordinary home. However, if you prefer to start your own seed, it will first be necessary to secure flats or seed boxes about three inches deep and any length or width which you may desire. I would suggest the simplest way to secure flats is to purchase empty finnan haddie boxes from your local grocer. These make ideal flats and are a very convenient size to handle. To ordinary garden soil add one-fourth well rotted manure and enough sand to keep the soil from becoming hard. Press firmly and evenly, make shallow marks two inches apart for the seed rows, sow thinly, planting one variety to a row, and cover the surface evenly with sand to the depth of one-eighth of an inch. Again press firmly and shade with paper until the plants come up. Avoid frequent sprinklings, and do not water late in the day, as this will have a tendency to cause the seedlings to “damp off.” When the seedlings have four leaves you may transplant them into your flats, again keeping the

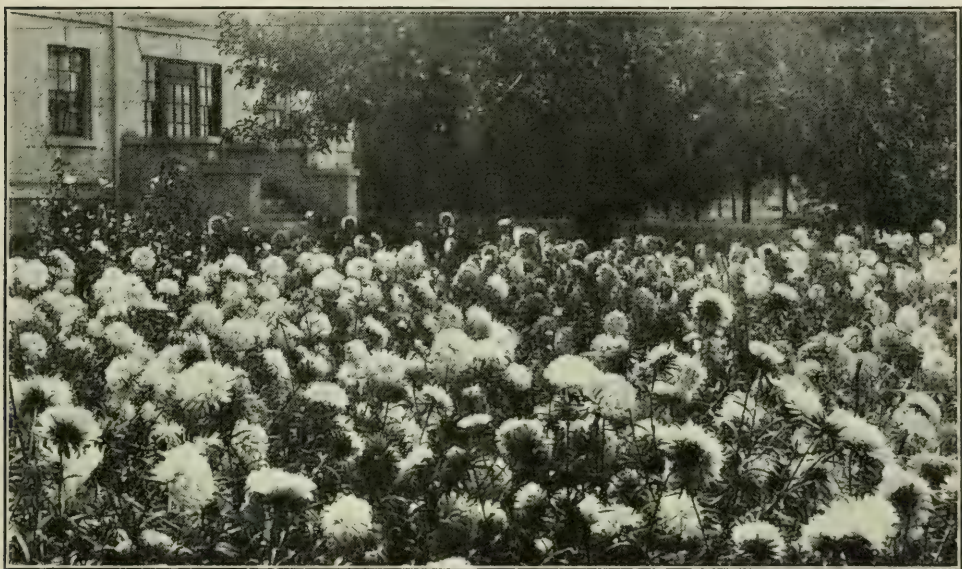
varieties separate. Asters should always be transplanted twice, as this develops a strong root system such as will be necessary to feed vigorous plants. The seedlings having attained a growth of at least three inches they will be large enough to transplant into the garden, but they must be thoroughly hardened off before this is attempted. This may be done by introducing them gradually to the cold, after which several degrees of frost will not harm them. So much for the seedlings.

CARE AND ATTENTION OF PLANTS.—While you are waiting for your seedlings to attain sufficient growth for the final transplanting, you may prepare the outdoor beds. These should be forked over and the well-rotted barnyard manure, which should be spread upon the beds the preceding fall, thoroughly incorporated with the soil, then they should be levelled with a garden rake and all lumps removed from the surface. Your plants should be placed twelve inches apart, in rows eighteen inches apart, which will permit cultivation between the rows. I would advise growing each variety in separate groups, for, if mixed, any slight variations in the blooming season would mean that some flowers would be at their best while others had not yet come into bloom, and still others might be fading. The soil on the surface should be stirred at least once a week to prevent its becoming hard and baked, and also to conserve the moisture. When your plants have attained a height of from six to eight inches and show a tendency to form buds, pinch out the terminal one, also the lateral buds near the ground. This will not only throw the strength into the laterals which you permit to remain upon the plant, but will add height and grace to the plant by keeping it up from the ground. I would advise leaving from six to eight branches on each plant. When these branches begin to throw laterals of their own these must *all* be pinched out. At first this may appear like a laborious task, but you will find if you devote a little time each day, that not only will this task be light, but the pleasure of seeing your plant steadily develop, under your hand, as it were, will fully recompense you for your labor. As soon as the buds are well formed you may give the plants a weekly application of liquid manure. This should not be too strong at first, but as the plants develop you may increase the strength, for asters are gross feeders, and it would almost seem as though they could not get too much of a good thing. Also, I would like to call your attention to the fact that strong growing plants require abundance of water. If these directions are followed out carefully, every flower which you have should be an exhibition bloom. You must not expect too much the first year, but the improvement which several years of close selection will make is simply wonderful. Your once stiff-stemmed, lowly Cinderella of the poor man's garden, will have been transformed to a graceful, long-stemmed queen, equal in grace and beauty and far surpassing in range of color, her haughty, greenhouse cousin, the chrysanthemum.

A word might be said here with reference to the difficulties which you may experience in combating disease and pests. Stem rot and blight would appear to be the only diseases from which you may expect any serious trouble. When either of these diseases appear the best method of dealing with it is to destroy the plant in order to prevent the disease spreading. Blight makes itself manifest by a streaked appearance in the plants and often one-half of the leaf will be nearly white. Stem rot may be detected by a wilted appearance of the whole plant, which, if you pull up and examine, you will find to be decaying just above the ground. The best preventive which I know for these diseases, for prevention would seem to be the only cure, is to grow healthy, vigorous plants, which, being constitutionally strong, are able to withstand the attacks of these diseases.

The aster is not particularly subject to attacks from garden pests, other than

those which are to be met with any day in the garden. Our old friend the cut-worm will be there early in the season, and the method of dealing with him is too generally known to be mentioned here. The white grub will cause more serious trouble in some localities, and where the ground has been newly broken hand-picking would seem to be the best method of ridding yourself of this pest. His presence may readily be detected by anyone who daily visits their garden. The very appearance of a plant, to one who is in daily touch with them, will tell you of the presence of this enemy at its root. The red-headed flea beetle, by sucking the juice from the young flower stalks, if unchecked, will do more damage to your asters than any other one thing that I know of. A spraying with a solution made from whale oil soap applied to the plants once a week will eliminate them. The only other insect from which you may expect any serious trouble is the Black Beetle. This insect feeds upon the petals of the flowers at a time when they are fully expanded and at



Asters.

Photo. G. H. Ryerson, Brantford.

their best, and, if not checked, they are liable, if they appear in large numbers, to entirely destroy your crop. As soon as they first make their appearance, a method similar to that by which potato bugs are gathered, that is, shaking them off into a pan, may be adopted. If you start before they become too plentiful you will soon be rid of this enemy.

In conclusion, with reference to varieties, as we are considering asters solely from the standpoint of amateurs, we can eliminate all varieties which are useful, chiefly because of their commercial value, that is, early varieties or varieties which bloom at a season when asters are scarce, and, consequently, command a high price on the market. To my way of thinking the varieties of asters which an amateur should grow are limited. The late branching in their various colors certainly cannot be overlooked, and the comet style of aster, such as *Rochesters*, *Cregos* and *Astermums*, for a ragged and fluffy flower, cannot be beaten. However, not all of these are good, and only experience will teach you which are the best. The habit of the branching and the comet are very similar and they may be treated in exactly the

same manner, and you will obtain the same results. You will find that in several years you will have established something very fine in each color of these different varieties and, with the help of nature, you will have added new colors, and you will be made to feel that the strain of asters which you are growing are your very own.

MR. DAVIDSON: As an amateur grower I appreciate that paper very much. The ordinary amateur has more trouble with asters than any other plant we have got. This I know from personal experience. I bought the best seed that money could buy from a standard grower—Vick, of Rochester. I have tried for years to make a success of asters. I have been told never to plant asters on the same ground two years running, and in personal conversation with Mr. Vick was instructed, when not using those plants for commercial purposes, to sow my seed in the ground and then transplant in the usual way afterwards, that even if I sowed them and they got a coat of snow it would not hurt them a particle. Now I tried that and gave as careful handling as I possibly could, and I found the same trouble occurred as when I set them out from the flats. If Mr. Ryerson will tell us how he gets over those troubles I would appreciate it. Even the cut-worm is a difficulty for the amateur to control. I am a great aster lover and am anxious to know how to prevent dry rot and the hard shell grubs which attack asters when they get just nicely into bud.

A MEMBER: I succeeded in growing them for two years, planting in the fall, however. Has Mr. Ryerson had any experience in bringing those on over winter? If you can bring them on on the 1st of July you would have magnificent results, but I would like to know what the secret of it is. I cannot do it every time.

ANOTHER MEMBER: I came across an interesting feature in connection with the growing of asters. I put a row or two in my hot bed for a neighbor, not intending to keep any of them for myself because I devote almost my entire time to the production of food. When the neighbor came to take them away there were more than he wanted, and he asked me to keep the balance. I had no other place but my corn patch. I planted them between the rows of corn. Those asters were trying all the time to look over the top of the rows of corn, having developed long stems and they were very beautiful.

R. B. WHYTE: I do not see any use in going to all the trouble of growing asters in hot beds. I find by growing my asters in the open that I get them in flower when I want them, that is in September. They are a far better plant than if grown in a hothouse or greenhouse.

G. H. RYERSON: In reply to the question how to prevent stem rot, I do not know any remedy, and the only way is the one which I have suggested, to select your seed and thus get a strain of plants that are so vigorous that they will be able to overcome this trouble.

The only method I know in dealing with the white grub worm is as soon as you see indications of it (and you can immediately tell if you are working among your plants each day by their appearance), if you take that grub out you will find it just about an inch below the surface. You can rarely save the plant at the root of which you find it, but by taking it up you prevent its going to another plant. These white grubs, as a rule, are not very plentiful. If you are sowing in soil where there are a great number of white grubs you will see them when you fork your soil over, and the ones which you don't destroy the birds very often find, the robins particularly are fond of the white grub.

In reference to growing asters on the same ground, I know it is generally advocated that asters should be grown on different soil each season. My asters I

have grown for five years on the same soil and last year I had the best that I have ever had. However, it is probably advisable to change.

I have never heard of asters being grown except as an annual. If carefully grown as an annual and trouble taken, you will grow as fine asters as you will want. Why try to make a biennial out of something that is naturally a perennial, when you can get just as good results by following nature and letting nature take its course?

With reference to growing asters between rows of corn, this brought to my mind something I had forgotten to say, that is to warn particularly against growing asters anywhere near a building or a fence. I have found that just as soon as you grow asters in the near proximity to a building or a fence, the reflected heat or the shade which is caused by that building or fence will cause your asters to be spindly, and the one thing you must endeavor to do is to build up not only the stems but the main plant. The main stem of the stalk should be at least two inches in circumference and the asters stand about four feet high when in bloom.

I admit that asters can be grown by not using hot beds, but the trouble with 999 out of 1,000 aster growers is that as long as they grow asters, whether they are six inches high or whether they are four feet high, they are satisfied, but why I suggest always the first transplanting is that by so doing you will add strength, by setting your plant back you will develop a root system which is ultimately going to develop a stronger and a hardier branch system, which will in turn support a hardier and a larger flower.

TROPICAL PLANTS.

WALTER T. ROSS, PICTON.

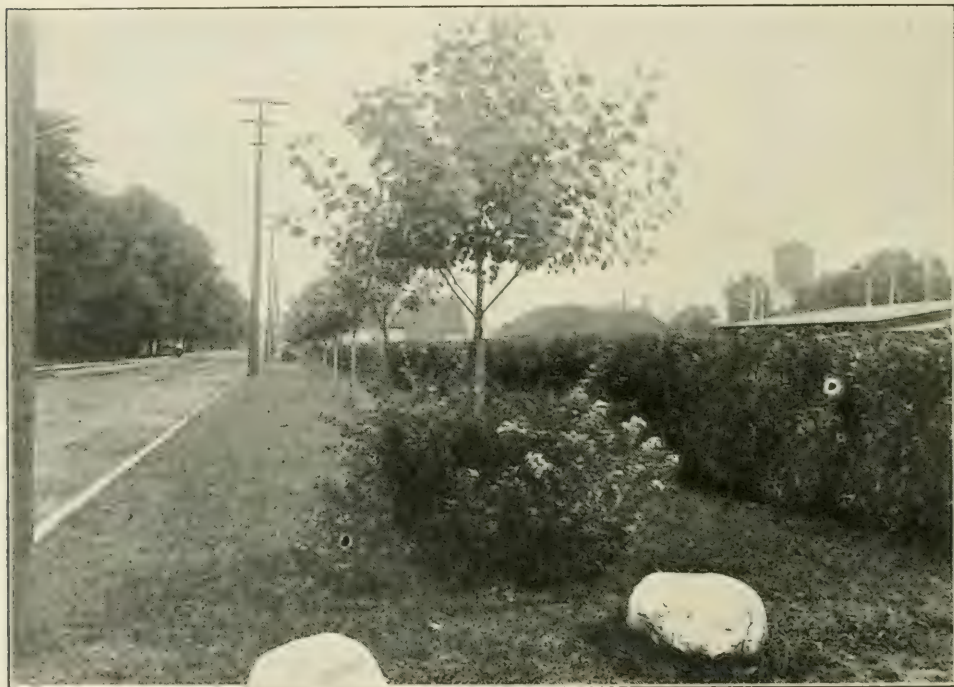
I am inclined to believe that the impression is prevalent with most lovers of flowers that little can be accomplished, in this cold climate, with the tender growth of the tropics, but the care and culture of tropical plants is much the same as other house plants. Sandy soil and good drainage, is, of course, of much importance; patience is perhaps more necessary, to develop their success, than one must exercise with the more ordinary garden or house plants; an orange tree, for instance, cannot be forced like a cabbage plant; and it is the same with all the citrus trees. Grafting is the quickest and safest way to bring them to flower or fruit; grafted on rough lemon and sour orange stock, with good care, they will bear fruit in three years.

The banana tree will make rapid growth with ordinary care, allowing a good supply of safe fertilizer, keeping it in a temperature of 90 to 95 degrees, and giving plenty of water. The flower bud forms in the bottom of the trunk of the tree, coming up in the shape of a flower stem, which opens into a large blossom, the fruit forming as the stem grows and hanging down beside the tree. The banana, usually, only bears one bunch of fruit, then dies or is cut down, shoots coming up to make a tree for the next season. The pineapple is much the same in both cases, new trees or plants for the next season are propagated from shoots that start from the roots. The insect pests that trouble citrus trees are the white and brown scale. A solution of fir tree oil is the best remedy for them; used either as a spray or to sponge the under side of the leaves where the scale is generally located.

The fig tree is very easily grown and fruited; I have successfully raised a large number of them; it is, I believe, the only tree known that does not show a flower before the fruit forms.

I have had a few copies of my list of plants typewritten and circulated among the members, so you will see I have had quite an experience, and more or less success, for an amateur with no greenhouse, only my garden in the summer and large, well-lighted office windows in the winter months. This list was prepared about fifteen years ago; I have not, now, all the plants listed and probably have some that are not on this list. I have selected a few that I have cultivated with success, some, perhaps, you can hardly call tropical, but they are unusual and you may consider them of interest.

Take, for instance, the trees first mentioned on the list. I have had a variety of very good oranges, lemons, figs and guavas, all of them of much better flavor than those you buy, because they were ripened on the trees before being picked. The lemons, when cut, were so fragrant their perfume filled the room and was as sweet



Boulevard and hedge to hide unsightly buildings, beautified by City of St. Thomas, residents and Horticultural Society. Trees planted are Carolina Poplar. Hedge, *Lonicera Tartaria Rosca* and *Rubra*.

as the orange blossom, while their flavor was delicious when made into lemonade, having little of the sharp acid we are accustomed to in the packed fruit, which is picked green. I wonder what we would think of a Northern Spy apple if picked before it matured on the tree?

I had a Pomelo or grape-fruit tree this summer with about a dozen or more fruit on it, which was thought quite a curiosity; one hears of oranges, lemons, figs and bananas having been fruited in greenhouses, but even there I do not know of a grape-fruit tree being in fruit.

The Paw-paw tree is most interesting, the fruit resembling a small melon. The leaves have the reputation of making tough meat tender. I tested this at one time, buying a couple of pounds of round, tough, steak and wrapping it up in the large leaves of the tree for half an hour before cooking. It certainly lived up to its

reputation in my case; the meat was made tender, with a slight flavor of the paw-paw, which was not at all objectionable. It might be a good thing if our meat merchants cultivated a few of these valuable trees. The *Melia* or Chinese lilac is very satisfactory, its light purple flower filling the air about it with a delicious fragrance.

The climbers come next, the *Stephanotis*, from the West Indies, gave me the most pleasure of any. My plant flowered after a year or two of careful maturing. In its twelfth year it had forty-six bunches of large, white, waxy flowers hanging from its branches or stems, most beautiful to see, and with an unrivalled sweetness of perfume. It stood seven feet high, thrifty and flourishing. I think it the handsomest plant I have ever owned. It grows from a slip and requires watchful care. I started several before I got one to attain such perfection. The "*Allamanda*," and the "*Antignon*" or "*Mountain Rose of Mexico*," are also attractive climbers.

Plants and shrubs are the last mentioned, and as the list is rather a long one I will speak of only a few. The "*Gardenia* or *Cape Jessamine*" takes the lead. I was told that it was very difficult, indeed almost impossible, to get it to flower, unless under certain conditions, so that I need not look for very satisfactory results. Well, I did look for them, and worked for them, so I got two plants to blossom. The flowers were large, white like wax, and emitting a fragrance not unlike the Tuber rose, set in a well shaped bunch of green leaves of beautiful color, shining as though polished. They make an ideal button-hole bouquet. Some may remember reading years ago of the then Colonial Secretary seldom appearing in the House without a "*Gardenia*" in his button-hole.

I have had very good success with tea, coffee and cotton, and, in spices, with cardamom, ginger, pepper, cinnamon; also with tapioca, arrowroot, and camphor. I have also grown successfully peanuts, and sweet potatoes in a sunny patch in my garden. The largest sweet potato I grew weighed a pound. I put a dozen on the scales and they weighed six and a half pounds, which I thought was quite satisfactory.

I really was gratified over my "*White Heather*," from the Highlands of Scotland. It is generally conceded that it is impossible to transplant it. I received some rooted plants from the Highlands and had a large pot of "*Bonnie White Heather*" in full bloom, the Scottish bride's flower, to reward my care.

The *Venus "Fly-Traps"*, known as the "*Fly Catchers*," are most interesting and appear almost human. They are found only in North Carolina. I have seen them catch flies, also spiders, small and great, as if they enjoyed it. The body of the victim is digested by the plant then in a day or two, the traps, which are at the end of the leaves open out ready for more grub, nothing being left of the insect but the wings and legs, which can easily be blown away. I have threatened to teach them to catch mosquitoes, but have not succeeded yet.

I am very much interested in some seed sent to me by the Rev. Captain MacPhail, seed which he gathered on the famous battlefield of "*Vimy Ridge*," the seed is of the Red Poppy, the White Daisy, and the Blue Cornflower. If I can succeed in growing these plants the combination of the "*Red, White and Blue*," from the world renowned "*Ridge*," where the Canadians gained such never-dying glory, will be most interesting.

To go back to my spices and condiments; rather an amusing incident occurred a while ago. A gentleman came into my office to look at my plants; I lifted a plant up to his face and asked him what it smelled like. "I cannot remember," he said, "but it is very familiar; it smells like ice cream." I said, "You have made a good guess; it is a vanilla plant."

LIST OF TROPICAL TREES AND PLANTS.

TREES:

Orange, Otaheite, Satsuma, Jaffa, Ruby, Navel, Kumquat.
Lemon, Genoa, Villa Franca, American Wonder.
Lime, Tahiti.
Pomelo, Aurantium, Improved Pomelo.
Banana, Cavendish, Ladies' Finger, Martinique.
Mango, Black.
Sapodilla (West Indies), Russet fruit, juicy and luscious.
Loquat (Japan), deliciously flavoured fruit for preserving.
Pomegranate, old historical fruit.
Fig, Celestial, Sweet Water, Pagadiere, green Ischia and Brunswick.
Cinnamon.
Camphor.
Apricot.
Nectarine.
Persimmon.
Melia, very fragrant.
Magnolia, grandiflora.
Eugenia, Jamboa or Rose Apple.
Eugenia, Micheil, or Cayenne Cherry.
Carica, Papaya or Paw-paw tree, makes tough meat tender.
Bauhinia purpurea, orchid-like flowers.
Star Apple.
Sugar Apple.
Japan Maple, Versicolor.
Bismarck Apple (from New Zealand).
Japanese Cedar.
Albizzia, Woman's Tongue Tree.
Avocado, Alligator Pear.
Guavas.

CLIMBERS:

Stephanotis, florilunda, very fragrant.
Baumontia, grandiflora (India, fragrant).
Allamanda, hendersonii.
Antignon Beptopus, or Mountain Rose of Mexico.
Schubertia grandiflora, flowers resemble Stephanotis.
Pereskia, or Lemon Vine.

PLANTS AND SHRUBS:

Azalia, white, pink, crimson.
Tea.
Coffee.
Cotton.
Tobacco.
Violet, California and other varieties.
Pampas Plant (South America).
Venus Fly Traps, catches flies.
Camellia.
Jassinum, Grand Duke of Tuscany.
Pleroma Splendens.
Nyctanthes arbor tristis, very fragrant perfume.
Tea Olive, very fragrant.
Vanilla Plant, very fragrant.
Murraya Exotica.
Acacia, farnesiana, perfume plant.
Rogeria Thrysacflora.
Crape Myrtles, white, crimson.
Tabernacmontana coronaria, fragrant.
Clerodendron, Balfouri.
Gardenia, Florida, very fragrant.
Daphne, Odorata, very fragrant.
Plumiera, the famous frangipana of West Indies, very fragrant.
Pitcher Plants.
Cardimon Plant.
Orchids.
Tapioca Plant, the Cassiva, South America.
Arrowroot Plant, Bermuda.

Ginger Plant, West India Islands.
 Raisins.
 Pepper.
 Sweet Potatoes.
 Peanuts.
 Pineapples, smooth Cayenne, Golden Queen.
 Poinciana, Bird of Paradise Flower.
 Brunfelsia, Brazil, uniflora.
 Brunfelsia, West Indies, Americana.
 Poinsettia, the Christmas Flower with scarlet bracts.
 Hedychum coronarium, or Ginger Lily.
 Bryophyllum Calycinum, green flowers.
 Chenille Plant.
 Lemon Verbena.
 Lavender.
 Fraxinella, or Gas Plant.
 White Heather.
 Mushrooms.

MR. DAVIDSON: Did you say you successfully raised the heather out of doors?

W. T. ROSS: I grew it in a bed.

MR. DAVIDSON: Did you not try it out of doors?

W. T. ROSS: It was sent to me from Scotland, cut out with the earth and roots, and I took the lump just as I got it and put it in. I had both white and purple.

MR. DAVIDSON: I brought a plant from Scotland myself. It was grown successfully in the greenhouse but it did not stand our winter. The reason I asked the question was that in New York the claim is made that they are growing it successfully out of doors.

FLOWERS THAT BEST SUIT THE GROUNDS OF NORTHERN ONTARIO.

MRS. LORNE MCDougALL, HAILEYBURY.

There are two or three bits of advice which should be heeded to accomplish easy, effective gardening.

Choose your flowers for color and size. If you have very little room make a speciality of one kind of flower. You will be surprised at the reputation you will gain.

Study where to buy the best seeds and the finest colors. Never buy mixed seeds. If it is only nasturtiums buy one variety in a package. Any flower becomes distinguished grown in masses, therefore, generally speaking, grow in masses and abundance. The exceptions to this rule make it all the more effective. This is nature's way. There is a large island near Haileybury whose hillsides in the spring are covered with thousands of yellow ladies' slippers. Everywhere as far as you can see they stretch under the black and white of the birches, and later they are followed, in the same riotous prodigality, by the orange lilies. It follows that you avoid narrow borders. A narrow border consisting of single specimens of many flowers is an ugly and confusing sight. Study color effects. Bachelors' buttons and pink phlox drummondii are exquisite grown together against grey rock. Orange zinnias, coral-red snap dragons and blue ageratum are wonderful against a neutral wall. These are the kind of achievements that transform an ordinary garden into an extraordinary—quite within anybody's reach.

There are three well known perennials I should like to see encouraged in Northern Ontario—hollyhocks, close to every house, delphiniums, where the sunlight catches their blue and copper, and masses of phlox, each mass of one color. A

cult might be made of the hollyhocks and each householder urged to plant at least a few. They give the maximum decorative effect at the minimum expenditure of time.

There is so much pioneer work going on, even in the small thriving towns, there is such an unfinished look, there is so much ugliness abroad in the way of burnt trees or lack of trees, unkempt vacant lots and colonies of weeds, that we need the distraction of the showy, daring productions of Dame Nature.



Double Tuberous Begonias.

Our climate encourages rich coloring and unusual coloring. Old rose (delightful in asters), salmon-orange, cerise-rose, these shades all come true to description and rarely sunburn or fade. So do not be afraid to try the pastel colors.

Grow tall, long-stemmed varieties in preference. If in doubt what to choose guide yourself in the catalogues by the height unless you want an edging plant. They suit our soil and conditions.

I give a very simple list of well known flowers with a few comments: .

PERENNIALS:

Tulips.—Grow the Darwins, the May-flowering, the Parrots, any late vigorous variety.

Daffodils.—Always grow well.

Narcissi.—Try some of the finer varieties, they keep multiplying. Plant these bulbs in your borders deep enough to stay there undisturbed.

Pansies.—I prefer a yellow self-colored variety (no eye) and the orchid-flowered, but all pansies do splendidly, grown not in shade but in the sun.

Gaillardia.—These will sow themselves year after year if you allow them.

Columbines.—Try growing the long-spurred varieties, once established they are always to be depended upon. Grow your own plants from seed.

Forget-Me-Nots.—Sutton's Royal Blue.

Delphiniums.—I recommend the varieties of Lemoine, Nancy, France. You can also grow fine plants from seed by discarding the disappointing ones.

Paonies.—You must plant at least a few fine roots, the most beautiful flower I saw last summer was a single pæony, one of Kelway's.

Phlox.—Too much cannot be said in its favor.

Gypsophilia.—Invaluable for cutting. Plant a row among the vegetables if you have not room elsewhere.

Hollyhocks.—A magician who transforms the common place and ugly into beauty.

These few perennials are always successful and give a succession of bloom. I could urge the cultivation of others:

Iris—absurdly easy to grow; *Anchusa*—for its unique blue; *Pyrethrums*—so beautiful, grown with forget-me-nots and columbines; *Sweet Williams*—those old favorites; *Astilbe*—charming to pick with your sweet peas or snapdragons—there is a queer pink one that tones in perfectly; Oriental Poppies and Lupines—I envied my neighbor his great purple sprays last June. These are all equally easy of success in your perennial border.

If you have space and time enough sow some Canterbury Bells next spring, and in the fall transplant them to a permanent, thoroughly prepared location where you can leave them undisturbed for a few years until you tire of them. They will keep re-seeding themselves and are very vigorous sturdy growers. The cup and saucer varieties are exquisite; any variety, single or double, will delight you. Try potting one occasionally for the verandah or house. Lavender, Canterbury Bells and a Coral-red Sweet William look well growing together in the border.

As for annuals, of course, in a country where the summer is just long enough to grow them to perfection so that they are still at their prime with the coming of autumn, what a temptation to extravagant planting of them!

Sweet Peas.—Are always my first choice. If your place is small grow them in circles, one color to a clump. Fertilize them with poultry manure, if obtainable, otherwise trench each ring with two or three spadeful of ordinary manure. Start your seeds in pots and transplant at least twelve or fifteen inches apart in holes deep enough to let the root stretch out full length. Restrain yourself in the number of varieties if you must, but grow enough of at least one variety to enjoy the full flavor of it, to be able to pick a large bowl full fresh for the dinner-table, or to watch the sunlight play on a sweep of intensifying color. I would suggest a lavender—Afterglow or Orchid or Bertrand Deal or Wedgewood, a salmon-orange such as Stirling Stentor, Helen Grosvenor, Fiery Cross or Scarlet Emperor, perhaps a crimson like Orion or King Edward Spencer, a rose shade like Rosabelle or John Ingman, a navy-blue (my favorite) like Captain of the Blues, or Lord Nelson or May Farquhar (a bunch of these picked with an odd green trailer is as beautiful as a bunch of violets and very similar), and, of course, a pink like Elfrida Pearson or May Atlee or Hercules or whatever variety appeals to you most. There is a hydrangea shade I always grow, unlike any other, called Thos. Foster, but I

emphasize, there is little beauty in sweet peas in mixture, whether grown or gathered in a hotch-potch. If you only wish to buy one package buy one named variety and grow it in as much abundance as you have room.

Grow *antirrhinums* to match your choice of sweet peas. My favorite is the shade called apricot. Both the tall and intermediate varieties are useful. Orange King, Fire King, Giant Buff, Golden Chamois, the different pinks and yellow, a white, tipped with lavender, indeed there are few varieties not worth cultivating. The antirrhinum is a general utility flower singularly free from insects and disease, and scarcely resenting any kind of ill-treatment in the rush of spring work.

I should then choose *nicotine* to plant, both white and the hybrids, chiefly because of their beauty in a bouquet.

The *sandera* I recommend as a pot plant for the verandah, much more symmetrical if the centre is picked out when small and the laterals encouraged.

Then we must have a few purple and flesh colored *asters* at least, of the long-stemmed, late blooming sorts, and one or two colors of *phlox drummondii*, a never failing friend; but again, not by any mischance, a mixture. The aster *Sinensis* or the Southcote Beauty is always lovely even for a careless gardener. I prefer the lavender variety.

There are other things hard to resist, a few *Pæony Dahlias*, Groff's *Gladioli*, two or three colors of the sturdy branching stocks that survive the last thing in the garden, several scatterings of the annual gypsophilia, blue ageratum for its blending color, a sweep of salmon zinnias, a long row of the great orange or the equally fine scarlet zinnias, so much larger and gloriously colored than you expect, a mass of giant hyacinth-flowered candytuft, and the odor of a red or a white mignonette next to the ageratum. How hard to deny ourselves these things when the spring calls us. And there are still unmentioned, *schizanthus*, *salpiglossis*, *nemesia*, *nigella*, all so successful with a little extra care, so satisfying to an artistic eye.

I have probably left out the favorite flowers of other gardeners. My neighbor would reproach me with verbenas, another enthusiast complain that I have said nothing of shirley poppies or godetia or *dimorphotheca*, hybrids of marigolds or of every other flower that flourishes excellently. As for godetia, an ugly flower generally, there are two long trailing varieties, a double pink and a lavender, always an addition to box or border.

So after all, *what to grow* is a question of space, situation, time, labor, self-restraint, and an eye for effect.

And even the cultivation of flowers can be made to help win the war, for the Soldiers' Wives League of Cobalt raised \$500 for their Christmas stockings to the boys in the trenches, out of a Saturday sale of garden flowers donated to them during July and August.

AN AMATEUR'S GARDEN.

REV. G. W. TEBBS, HAMILTON.

(Illustrated by lantern slides.)

A man keeps a garden for one of three reasons: First of all either because he is ashamed of his present surroundings and his neighbor has a good garden, or he takes to it like ducks to water, or else he takes to it because he makes something out of it. The next point is, what is the relationship between the Horticultural

Society and these amateurs? First of all, we ought to be prepared to give pointers to the man who is trying to run his little garden to the best of his ability and light. We as a society should enter into that spirit of co-operation in helping others. Some of you can grow asters; let everybody know how you do it. Those of you who have a fine perennial border, let others know how you got it and share it up amongst your other members. Give pointers, and also plan for the other fellow if he does not know how to lay out his garden. We were all very much interested in the paper given by Mr. Dunnington-Grubb. We have not all lots like that, but we have our little gardens, and those of you who have the experience see to it that you



Deutzia Longifolia.

help those who do not know. For instance, when I came to Canada thirteen years ago I started an asparagus bed. I made it in the trench style the same as we did in the old country. The first winter I was here everything froze up down to the roots. Your experience in the past teaches you what to do in the future.

My joy in the garden is not in specializing so much, but it is so that in the winter time I can enjoy my flowers just as much as I do in the summer, and I guarantee that although I have not got a greenhouse, and I have not the facilities

for the winter time that some have, yet I have my little photograph camera go over the garden in the summer time, and, if I can back up my stories in the winter time with summer pictures, all the better.

When I came to Canada thirteen years ago I had the idea that no one had any ploughs except the farmers out on the prairies, and I was simple enough to begin to spade a back garden of eleven acres. I got about two acres or more done when I found out that people had ploughs.

At first, wanting to get the very best of everything, I used to send to the Old Country for every bit of seed I got, and while everything was so excellent and true to name, the extra expense of the express and duty was so out of proportion to what one could get here in Canada, I had to discontinue it. A friend visited me lately, a missionary, whose home is 980 miles north of Edmonton at the mouth of the Hay River, at the Great Slave Lake. Sutton's, of England, send him every year a supply of seeds. He grows all the hardier vegetables, showing the possibilities for these even so far north in our western country.

This afternoon the difficulties of securing fertilizer were mentioned. Beware of where your fertilizer comes from. The man who is the caretaker of the property I spoke of above obtained some manure from a man whose farm was infested with this bindweed, and he had just manured his tiny piece of garden and the seeds among the manure had grown, and although some of you talked of twitch grass, it is nothing compared to the bindweed. About thirty Irish boys tried year by year with spade and carefully going over it again and again to eradicate it, but it came up just as thickly as if we had not been over it, within a month or two of our going over the ground. I tried covering the ground over with tarred paper, but without success in getting rid of it.

The next view shows the boys putting in Cuthbert raspberry plants. We gathered the next year a very fine lot of berries from this patch.

Here is a little piece of ground illustrating the twitch grass proposition on which I planted a lot of bushes I got from the nurseryman. Two years before the picture was taken of this piece of ground there were a lot of old black currant bushes that had been there for twelve or fourteen years without having been pruned or attended to, and the same with the grape vines. We dug that over thoroughly, picked off the twitch grass and let it lie on the top as best we could, and put peas there. That picture shows you the peas there three weeks after.

Notice the windbreak of lilacs in this garden. We had difficulty with them throwing out their suckers into the garden plot all the time. In order to stop this somebody suggested to put a board down in the ground, edgeways just beneath the surface of the ground, which would prevent the lilac suckers working their way through. It proved quite efficient.

Mention has been made of Golden Bantam Corn. If I remember rightly the first appeared in the seed catalogues some four or five years ago. I sent for some, and, that was the first grown in the town and one of the first in the country. There are two kinds, one was Golden Bantam, the other was Howling Mob.

When showing you a picture of a vegetable garden first of all let me tell you about parsnips. You will read in the paper where people have left them in the ground during the winter and have used them the second year and there have been fatal results from their use. It seems they not only turn wooden and fibrous, but there is also in them very deadly prussic acid, and families have been poisoned from the use of parsnips used in the second year. I had this very fine crop and saved the seed and had a good crop the next year. Whether it is true or not I do not know,

but I was told parsnip seed is no good the second year, you must have fresh seed every year. I tried it the second and third year, but none of it came up.

Here is a little wrinkle that I found effective; where the little striped beetle attacks your squash and marrow, the suggestion was given to me (and I found it effective), to plant moth balls in the same hill with the plants.

We have heard a good deal about good seed. Here are a couple of good cauliflowers. I have always advocated that the best seed to get is the cheapest in the end, but in Orangeville one of the grocers offered me three packets of cauliflower seed for 5 cents. I scattered it in a little vacant part of the garden and then picked out just what plants I needed and put them out between rows of raspberries, and right on from the end of September to the end of November I got a beautiful crop of cauliflower.

I am very fond of the English cucumber. This shows you some of them growing in our greenhouse at Hespeler. You get about 6 seeds for 50 cents, and they are very prolific. I found some of the Guelph people growing these ordinary greenhouse cucumbers on their fences in their gardens. They did it on the advice of the agricultural people at the College, and they were having very good success.

A lilac hedge 300 feet in length in bloom scented the whole of the town. Just one of the ordinary varieties that had evidently been planted many years ago.

A little perennial border, some 50 feet in length, and I obtained it all by going to a dump heap not many miles from my home, and in an ordinary basket I brought a little of one thing and a little of another, and I had sufficient for that border.

Two pictures illustrating that wonderful show of tulips which those of us who have been to Grimsby to see Dr. Clark's garden admire. In this garden of Dr. Clark's there were 80,000 tulips this spring of over 200 named varieties, and these pictures will give you some idea of the magnificent display. Dr. Clark never tires of telling you of the beauties and best varieties, and his experience in growing and perpetuating these wonderful tulips.

A MEMBER: Was Dr. Clark able to preserve his tulips until fall fair last year? He said at our last convention that he would try this.

DR. CLARK: I took some out about the 18th of July which were good for five days. I took some out about the same date in August. They were still fine and good for about three weeks, but I did not consider them show specimens.

MUSHROOM CULTURE.

WILLIAM ALLAN, TORONTO.

I have been asked to speak to-night on the cultivation of bulbs and mushrooms. These are two subjects that take a long time to discuss and go into them thoroughly, so I think it would be advisable to omit the bulbs to-night. You have heard from Mr. Tebbs and other speakers about the growing of bulbs, so I will devote a short time to the cultivation of mushrooms.

Of all crops under the sun we have more failures in mushroom growing than anything else. When you put in peas you have peas; when you put in beans you can see the beans, you know what you are planting; when you sow cauliflower seed you have the seed, but you don't really know whether it is cauliflower, cabbage or kale seed until such time as you see the plants grow. For mushrooms you have nothing but a little brick containing some mycelium not visible to the naked eye. Of all the fascinating things that I know of, and I have been in the horticultural world since

boyhood, I can assure you there is nothing more interesting than the growing of mushrooms, and it is very simple indeed. Why so many fail in it, it is hard to say. Some people are prone to water too freely, others do not give sufficient. Now there are two ways of growing those mushrooms. I have experimented with both kinds. There is one way which takes three weeks to a month to prepare the manure properly. In another way you can prepare the manure in at least seven days, put it into your beds and have thoroughly good success. To prepare the manure in seven days takes a little skill, and you need to be a little careful, but if you do pay a little attention to the manipulation of your manure and get it into proper condition for the receiving of the spawn, you are more than paid for it. What I tell you to-night is my own practical experience. I have grown mushrooms successfully, and, like a good many others, I have had a good many failures, but, by comparing the two, I think the balance is on the right side of the account. I have had more hits than misses. My theory of growing is simple, and I have told it to a great number of people in Toronto, and I will illustrate it to you to-night in a few minutes, showing you what an amateur really can do in the way of growing mushrooms. To grow mushrooms you don't want a big plant, you don't require a lot of skill or a lot of hot water pipes.

One man to whom I gave my experience, from a bed six feet six inches long by two feet three inches wide, cut and sold over forty pounds of mushrooms. At the present time he has got a magnificent display; he followed up the instructions I gave him, to place the manure on the quick system and had splendid success.

I will now go into details of the quick system as briefly as possible. In the first place obtain a load of manure and put it in an open shed, a cellar will do equally as well, but of the two I prefer the open shed. Put it on your floor and spread and turn it several times the first day. The reason that I advocate turning it at least three or four times a day is this: mushrooms are particularly fond of nitrogen. The steam that comes away from the manure when it heats is the very thing you want to preserve, and to do that and be successful with it, you must turn it at least three or four times a day. The turning condenses the steam, cools the manure and this steam is retained. Another way is this: To the quantity of manure mentioned put one-quarter the quantity of pure loam. That helps to retain the steam, and that is converted into nitrogen, the very thing mushrooms require. You turn that for about a week and the manure is ready to put in the beds. When you put the manure in the bed, with the quick system, the bed must not be more than eight inches deep. The reason of that is this: If you put too much manure in, say fifteen inches deep, it has a tendency to heat, and when it heats you may as well not use it, because mushroom spawn will not stand heat at all. By putting it in eight inches deep the manure cannot heat violently and will produce the heat that the mushrooms delight in. Put it in firmly, so that the mycelium when it does start will run freely. I generally put my spawn in when the temperature is about 90, but you must do it on a falling temperature. When you see the mercury falling and it gets to 90 or say 85 or 75 or 70, you can insert your spawn. Put it in half an inch below the level of the manure. The great secret of success with mushrooms is this: Once your bed is in don't be in a hurry to earth it over. It is generally covered with an inch to an inch and a half of soil. Now my contention is this: When you have the spawn up, let it remain from ten to fifteen days before sealing. By sealing at once the heat rises too rapidly, and it has a tendency to run up to 100 or 110. By leaving your bed for ten or perhaps twenty days (I have left it for twenty-one days before sealing over), with a little care you should

have good success. After you have the bed sealed you require to water just to the depth of the soil that you put on the bed.

Another thing to notice is this: If there is any likelihood of your spawn dying out I would recommend you, after spawning, to give the bed a thoroughly good soaking with water the same temperature as the bed itself. I have done that repeatedly and have had magnificent results.

I have been asked repeatedly why I do not always water it when it is so important. The reason is this: If the bed seems moist enough and, on examining the manure, I find that there is lots of the mycelium about, with a little care we will get another crop presently.

Another mistake that people make is this: As soon as they see the little white



House and grounds of Mr. A. B. Ormsby.

threads appearing on the surface of the soil they think they should have mushrooms the next morning, and to hasten the growth they at once put on a lot of water, which is ruinous. Now you want to be patient and wait. From the time that you see the white threads appearing on the surface and the little peas, which are the mushrooms, it takes from eight to ten days for them to develop thoroughly. Another mistake which is often made is having the room or cellar too drafty, the cold strikes the mycelium and with the heat in the manure it is impossible for it to run successfully. When you have your bed opened and the mushrooms appear, I would advise you to cover the bed with a little straw to the depth of three or four inches, watching at the same time that you do not interfere with the soil, say about six inches above the normal level and cover that with any old canvas sheets, blankets or anything in order to retain the warmth and the moisture as well.

You will see that mushrooms, by a little judicious management, given the necessary moisture that they desire, are quite easily grown. I will show you on a few slides what has been done with mushrooms.

This picture represents a bed that was spawned and treated as I have described. Off this same bed we took at least six crops of mushrooms. I have been repeatedly asked if it is necessary to respawn for every crop. Not at all. Once you spawn your bed and the manure is in good condition and you treat and follow the directions successfully, you can, by a little management, procure at least seven or eight crops off the one bed. Last season we started picking mushrooms off a bed similar to this in the month of October and we kept picking successfully right into the month of February.

The next slide represents the third crop of mushrooms which was taken off this bed. I have been asked by several people the best kind of spawn. That is a very important thing. The finest that I have ever tried is Lambert's Pure Culture. It is put up in the United States and can be procured in any florist store down town. I have had more success with it than any other tried. I have sent to Sutton's in England and have had their famous Twentieth Century specimen, but, taking into consideration the expense and the distance it has to come, it is not really worth the trouble when you can get excellent bricks of spawn here.

I have known men who have gone in for mushroom culture and they are quite content to procure a few loads of manure, put it into a box or a corner of the cellar, and then without giving the beds any care they attribute their failure to bad spawn, never taking into consideration that these require a little attention and a little skill. I have, however, had failures myself; once I had two beds made up out of the same pile of manure, and while one bed was most successful the other was a total failure.

When I make a bed I insert the thermometer and make accurate notes every day, and by reference to these notes from time to time I have come to the conclusion that to be successful with mushrooms you must not give them violent heat, but just a little heat, and by turning the manure constantly you retain the steam as before stated.

A MEMBER: What kind of manure do you use?

WM. ALLAN: The finest manure you can get is horse manure.

A MEMBER: What about street scrapings?

WM. ALLAN: There is too much oil in the street sweepings in Toronto.

A MEMBER: Would there be any oil off the asphalt pavement?

WM. ALLAN: Yes.

A MEMBER: In inserting the spawn in the manure do you break it up into little blocks, and do you insert more than one in a place?

WM. ALLAN: You break it up into eight pieces and insert about nine inches apart.

A MEMBER: How long after the first crop can you get another, and how do you manage it?

WM. ALLAN: After you get one crop of mushrooms I would advise you to re-soil the bed. When you pick out a mushroom there is a little dent left in the surface of the soil. Take a little soil in your hand and scatter it over that. Then spawn it again, roll on your canvas and follow out the instructions I have given above until such time as the bed is grown. Under careful cultivation I have had seven or eight crops from one bed.

A MEMBER: Is your bed on the floor or above the floor?

WM. ALLAN: You can have it either way. If you have it above, let it be about four feet above. If you have it on the floor lay your manure on boards. Mushrooms will grow on concrete very nicely, but they will do better by placing boards on the concrete so as to keep that cold chill from striking the bed.

A MEMBER: An earth floor would not require any boards?

WM. ALLAN: No, but it has a tendency to dry your manure out.

An illustrated lecture, by Mr. Frank Yeigh, then followed on "Canada and the Motherland in War Time."

TREASURER'S REPORT.

C. A. HESSON, ST. CATHARINES.

Mr. Hesson called the attention of the Convention to the subject of affiliation fees. One of the members suggested that the Constitution be printed in the report next year to bring this matter forcibly to the attention of the Societies.

Moved by Mr. DAVIDSON, seconded by Mr. EVANS, that the Treasurer's report be adopted and that the directors of this Association be and are hereby empowered to revise and prepare a new constitution and by-laws with rules of order incorporated for the proper guidance of this Association, and that the same be submitted to this convention at its next regular meeting. Carried.

The Treasurer's Report will be found on page 6.



Where England's national flower flourishes.

REPORT AND CONTRIBUTIONS OF THE COMMITTEE ON NAMES AND VARIETIES.

The Committee begs to make the following report and submit for publication the attached contributions from its members:

Your Committee has deemed it wise to follow the precedent of the past two years, namely, to forego the prosecution of several lines of work which it previously undertook. This in some cases is necessary owing to the fact that many of the members of the committee are much busier than usual because of war conditions. For this reason also the Committee has not been able to meet together for consultation as was the custom before the war commenced. It should be stated,

however, that certain members of the Committee have work in hand which it is hoped will be submitted for publication as early as possible.

The members of your committee now reporting are as follows: H. J. Moore, Niagara Falls; F. E. Buck, C.E.F., Ottawa; P. H. Mitchell, Toronto; Prof. W. T. Macoun, C.E.F., Ottawa; Wm. Hunt, O.A.C., Guelph; O. J. Robb, Vineland Station; L. Norman, Galt; J. C. Crombie, St. Thomas.

H. J. MOORE, *Chairman.*

F. E. BUCK, *Secretary.*

DESCRIPTIVE LIST OF HARDY AND SEMI-HARDY PRIMULAS.

H. J. MOORE, QUEEN VICTORIA PARK, NIAGARA FALLS.

Little, if any, systematic experimenting has been done with the hardy and semi-hardy species and varieties of the *Primula* in Canada. Perhaps this is on account of the supposition that few of them are hardy enough to withstand the rigorous winters. Very few are entirely hardy, as disclosed by the test of the following kinds, all of which have been grown for at least two seasons in the Queen Victoria Park. Many beautiful kinds, however, are with a little protection so hardy that they survive the winters practically unharmed, and in spring furnish a display which well repays for any labor devoted to their culture.

Generally speaking, the plants in the following list merit the attention of all who are interested in spring gardening, and for this reason many of the varieties should prove remunerative to florists. As botanical descriptions would be of little use to horticulturists, the subjects are described almost purely from a horticultural standpoint.

1. *Primula Auricula* varieties (The Auricula). There are many beautiful varieties of *P. auricula*, some of them almost hardy. They are divided into classes according to some distinctive flower character, the principal being the grey edged, white edged, green edged, self, and Alpines. In these classes the varieties are named and standardized. Many of the plants survive our winters with a protection of leaves or litter, and are unique for the herbaceous border. If potted in a mixture of one part of loam, leaf soil, rotted cow manure and coarse sand, with a little broken charcoal, and wintered in protected cold frames, the plants make splendid flowering subjects for the cool greenhouse during spring.

2. *Primula cortusoides*. The deep rose colored flowers of this species are borne well above the foliage to a height of fifteen inches. The leaf stalks and undersides of the leaves are hairy. Several flowering stems are produced at the same time. The plant is an excellent and graceful subject for semi-shady nooks in the border where it requires a light sandy soil with plenty of humus. It is hardy with slight protection. The flowering period is from May 15th till July.

3. *Primula cortusoides*, var. *Sieboldii*. The varieties which have originated from *P. cortusoides* are most beautiful subjects for the shady border. They are hardy and require protection only in zero temperatures. A fairly moist light soil is necessary to their welfare. Their flowering period is approximately May 20th until June 30th. (For description of the type and indoor uses see 1916 list.) The variety *Sieboldii* and its hybrids should be grown in every garden.

Queen of Roses, a plant with deep rose pink flowers, Umbellate, about nine flowers to the stem, which reaches a height of twelve inches, several stems being produced. The foliage is of a medium green.

Maiden's Blush. The flowers are white suffused with rose, and twelve inches high.

Sirius. The large white flowers of this variety are from one to one and a half inches in diameter (as are the two forementioned ones). The foliage is of a light green. Cortusoides and its varieties are all excellent for pot culture.

4. *Primula capitata*. A plant with flowers of a deep violet blue, arranged densely in globular heads, which attain a height of about nine inches. The flowering stems are covered with a white powder. The leaves are wrinkled and toothed, and are powdered on the underside. The flowering season is from May till July. A semi-shady fairly dry position is necessary. The plant is better adapted to the rock garden than elsewhere. If grown in a cold frame and flowered in a cool greenhouse, it makes a charming pot plant. The flowers must be shaded from the sun.

5. *Primula denticulata rosea*. This beautiful variety should be generally grown. The flowers are rose purple with a yellow eye. The inflorescences which sometimes contain more than fifty flowers are dense and globular, and are in flower from April 13th till May 26th. The plants are excellent for planting during fall in beds or borders where spring flowers are required. If planted nine inches apart, the bed will be as distinctive as a bed of hyacinths, which at a short distance the flowers resemble. The plants may be substituted for bulbs or be used in conjunction with them. A soil containing much leaf soil is excellent for their culture. The leaves are hairy, are covered with a white powder, and are coarsely wrinkled and toothed. The flowering stems attain a height of nine to twelve inches.

6. *Primula denticulata alba*. A white flowered form of the above similar in all respects except in color of flowers, and of leaves which are a paler green. The plants may be used to furnish a bed of white flowers for spring flowering or be mixed with the variety *rosea*.

7. *Primula denticulata cashmeriana*. This variety requires somewhat different cultural treatment from the two forementioned ones. It should be planted in a light soil in a somewhat raised position, so that its crowns will be well above water which in spring may collect. Otherwise they will rot. A moderately sunny position is necessary. The plant flowers from April 18th until May 20th. The flowers are light purple with a yellow eye, and about twelve inches high. The undersides of the leaves are covered with a beautiful golden colored dust. The inflorescence is an umbel similar to the other varieties. Not being entirely hardy a protection of litter must during winter be afforded.

8. *Primula Elatior* (The Oxlip). This perfectly hardy plant is a cross between the English primrose, *P. vulgaris*, and the cowslip, *P. officinalis*. The flowers are pale yellow and are horizontal or drooping on their stems. They are at their best from April 15th until May 15th. They reach a height of nine to twelve inches. The petioles of the leaves are somewhat winged. The plants are very useful for planting out in beds or borders during autumn for spring flowering. It is best to afford a light covering after planting. As a carpeting plant for beds of tall bulbous plants, it is good, and should be more generally used. May be propagated by division, or raised from seeds.

9. *Primula frondosa*. A little alpine species with purple flowers. The stems and leaves are covered with a white powder. In height it is only four to six inches. It requires a semi-shady spot, with some protection during winter. It flowers from May 4th till the 26th. The plant is especially adapted to the rock garden.

10. *Primula japonica* varieties (Japanese Primroses). A plant equally desirable for outdoor or indoor culture. (For description see 1916 list.) The following varieties are all hardy and of great value. They are perhaps the best of the genus for associating with aquatic plants, as they are entirely at home along the margins of pools or streams, if planted in positions where the roots are above the water line. In a semi-shady position in the herbaceous border where a deep rich and moist soil pertains, they flower splendidly, and over a considerable period, namely, May 30th until July 15th. The plants are easily raised if the seed is sown as soon as ripe.

Rose Queen.—A variety with handsome rose pink flowers, about eighteen inches high.

Blush Beauty.—The flowers are a delicate blush white.

Splendens.—A plant with large fiery crimson flowers. The tallest variety, reaching a height of twenty-four inches. A most magnificent hardy *Primula*.

11. *Primula officinalis* (The Cowslip). A hardy plant, the flowers of which are pale yellow, more or less drooping from their stems. The height is various, usually from nine to fifteen inches. This species is interesting as being one of the supposed parents of the Oxlip.

12. *Primula pulverulenta*. A half hardy perennial, which has large handsome purple maroon flowers, borne in tiers on long stems, after the manner of *P. japonica*. The leaves are dark green, nine inches long, and are wrinkled and toothed. The species is excellent for border positions, in sheltered localities where it will probably survive with a covering of litter. As a pot plant for greenhouses with intermediate temperatures, it is excellent and its color renders it valuable. In very cold localities it is better to carry the plants over in cold frames than to subject them to the winter with chances of failure.

13. *Primula Veitchii*. A new half hardy perennial species of Chinese origin. The flowers are of a beautiful rose purple color, and are borne in umbels. The several stems reach a height of about twelve inches. It is best to winter the plant in frames. The leaves are hairy and somewhat palmate in shape. A greater percentage of plants will germinate if the seeds are sown as soon as ripe. The flowering period is from May 29th till July 1st.

14. *Primula vulgaris* (Common Primrose). A hardy well known perennial species dear to the Briton's heart. The hardiest of all primroses, it may be used to advantage in many positions. Splendid for naturalizing in the wild garden or woodland, for massing in the herbaceous border, or in the rock garden. It does equally well in a stiff loam as in a light rich soil. It is easily raised from seeds or by division of the root stock. Height of the flowers about three inches.

Primula vulgaris varieties. There are several white and also one or two good blue flowered varieties of *P. vulgaris*, which go under the garden name of *P. acaulis*. In regard to hardiness, uses and other qualities, they are equally as desirable as the species, and require the same treatment. They flower from April 19th till May 28th.

15. *Primula variabilis* (The Polyanthus or Cluster Primroses). The Polyanthus supposed to be a cross between the common primrose (*P. vulgaris*) and the Cowslip (*P. officinalis*) has many splendid varieties. They are all hardy and useful for spring flowering in beds or borders. Whether mixed or planted in separate colors, they are hard to surpass for naturalizing in the wild garden or woodland. For the rock garden they are excellent, and equally so for pot culture in cold frames and cool greenhouses.

The following varieties are standard. In each case the flowers are umbellate and are held well above the foliage, differing in this respect from the primrose proper.

Munstead Giant White. A plant with large white distinctive flowers and deep orange eyes. The flowering stems are very strong, and about nine inches long. The plant flowers from April 15th till May 30th.

Hose in Hose Yellow. The flowers of this charming variety are of a golden yellow with deep orange eyes. Height about nine inches. This is a vigorous variety and excellent for beds and borders.

Munstead Giant Red. The large dark red flowers of this variety with their prominent orange eyes, are very attractive. The flowering stems are about twelve inches in length. A most vigorous plant, and adapted to all the forementioned uses. It flowers from April 30th until June.

Ruby Red. The flowers are of a beautiful ruby red with eyes that are alternately striped with orange and yellow, giving a curious effect. They attain a height of six to nine inches. The flowering period is from April 28th until June 6th. The leaves are of a medium green.

Barr's Orange Yellow. This variety merits attention not only on account of its attractive flowers which are orange yellow with deeper orange eyes, but for the reason it will bear twenty or more flowers to the umbel. It is one of the best. Its height is from nine to twelve inches. The flowering period is from May 2nd until June. The leaves are of a medium green.

Gold Laced. The gold laced varieties are not extremely showy, therefore not so useful as the other varieties. For pot culture or for exhibition purposes, they are interesting. For bedding or naturalizing they are of secondary importance. Their height is from six to nine inches.

Wooller's White. The pure white flowers of this variety have the usual orange eye. The foliage is light green. The flowering period is during May and June. All the Polyanthus varieties may be raised from seeds sown in spring, or as soon as the seed is ripe. They may also be readily propagated by division during early fall.

DARWIN TULIPS—BEST TWENTY-FIVE VARIETIES.

W. T. MACOUN, DOMINION HORTICULTURIST.

The following list of Darwin Tulips prepared especially for the report of the Committee on Names and Varieties of the Ontario Horticultural Association, should, like all lists prepared by the Committee, be discussed by the members and improved if possible. There are so many varieties of Darwin Tulips to select from and there is such a difference in individual taste that it has been difficult to prepare a list that would be likely to prove acceptable to a large proportion of the members. The colors under which the different varieties are grouped are those used by the Tulip Nomenclature Committee of the Royal Horticultural Society in their report in 1915.

Some of the less pleasing shades of color are not represented in the following list. In a larger list they might be.

Scarlet—Vermilion:
Isis.
Whistler.
City of Haarlem.

Crimson Maroon:
King Harold.
Millet.

Cochineal—Red:

Farncombe Sanders.
Prof. Rauwenhof.
Europe.

Cerise:

Pride of Haarlem.

Rose:

Edmee.
Princess Elizabeth.
Baronne de la Tonnaye.

Pale Rose:

Psyche.
Suzon.
Flamingo.

Salmon Pink:

Clara Butt.

Purple—Black:

Zulu.
La Tulipe Noire.

Rosy Purple:

Violet Queen.
Mrs. Potter Palmer.

Lilac:

Melicette.
Rev. H. Ewbank.

Lilac, with a lighter edge:

Electra.

Blush:

Margaret.
Zephyr.

A LIST OF HYBRID PERPETUAL ROSES.

P. H. MITCHELL, TORONTO.

To make a list of twenty-five Hybrid Perpetual Roses of more value as a guide I divide the list into three groups. First, those that in our own garden I would consider the indispensable ten; second, the next ten, being excellent garden roses but not having the outstanding features of the first ten; third, five which I have observed with considerable satisfaction in other gardens and which I have now planted in our own, but as yet they have not shown their flowers.

Further, the first ten are in order of personal preference, the second and third groups being alphabetically arranged.

THE FIRST GROUP:

Snow Queen (Frau Karl Druschki), the best white rose and would possibly be the best rose of all were it not for its lack of fragrance. As a summer and autumn garden or exhibition rose it is unsurpassed. The climbing variety is very satisfactory and has the same immense blooms as its parent.

Hugh Dickson, unquestionably the best red hybrid perpetual; the colour is a scarlet crimson and the rose is best grown as a large bush against a back support. Flowers fairly freely in autumn.

Mrs. John Laing, a fine fragrant rosy pink of large size and splendid form. A fair autumn rose.

Paul Neyron, always a favourite rose; very large, bright pink; excellent habit of growth and very fragrant.

Mrs. R. G. Sharman Crawford, a very pleasing pink rose with splendid growth, making a compact, upright bush. Fragrant and free blooming.

Gloire de Chedane Guinoisseau, one of the newer roses, and while generally considered a shy bloomer, it has done splendidly with me. Extremely large blooms of full form and bright red colour and good growth of plant.

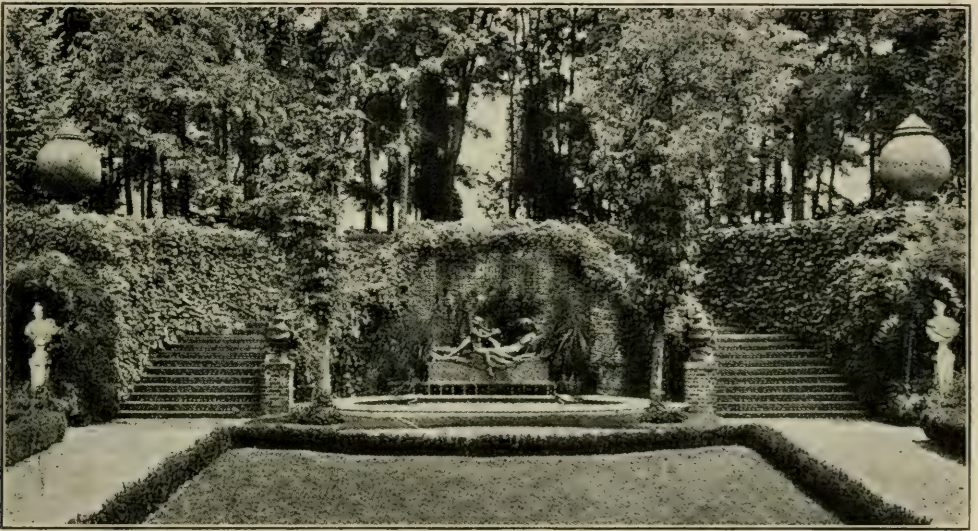
Ulrich Brunner, a prolific summer and autumn bloomer, good colour and form and fragrant.

Coronation, one of the newer roses, of immense size, free blooming, bright flesh pink.

Prince Camille de Rohan, quite the best of the very dark crimson roses.

General Jacqueminot, a brilliant crimson scarlet, one of the very old favourites.

While the above ten are selected for their value as Garden Roses, it is much to their credit that several are among the best Exhibition Roses. For instance, in the National Rose Society, in England, holding the foremost Rose Exhibition in the world, *Snow Queen* or *Frau Karl Druschki* until last year had led the Hybrid Perpetuals and Hybrid Teas for some time both in summer and autumn shows. Mrs. John Laing and Hugh Dickson appear about tenth on the exhibition list of some hundred roses. *Ulrich Brunner*, *Coronation* and *Gloire de Chedane* *Guinoisseau* all rank in the first quarter of the summer list of Exhibition Roses.



Novel treatment of grounds leading to garden.

THE SECOND GROUP:

Captain Hayward, light crimson in colour, loose petaled, vigorous growth.

Charles Lefebvre, bright crimson, of good form and a good growing rose.

Commandant Felix Faure, an attractive, intense blackish red rose of vigorous growth.

Duke of Edinburgh, a bright red rose of good form, fair in autumn, not very fragrant.

Fisher Holmes, crimson-scarlet of good form.

Her Majesty, bright satiny rose, very large and full.

Magna Charta, rosy pink, free blooming.

Marie Bauman, large vivid red blooms.

Suzanne Marie Rodocanachi, a large globular glowing rose; very vigorous.

Victor Hugo, brilliant crimson scarlet, good form. Plant is rather weak.

THE THIRD GROUP:

Geo. Atends, generally described as a pink Frau Karl Druschki, but with a single rose on the tip of the stem. A fine rose, but not the equal of Druschki.

Clio, vigorous, the pink roses growing in clusters.

Louis Van Houtte, intense maroon crimson colour. Rather weak growth.

Horace Vernet, brilliant red and of an excellent form.

Ards Rover, a climbing Hybrid Perpetual with large crimson blooms.

In concluding the list I would point out that nearly all beginners want to start with American Beauty Roses among their Hybrid Perpetuals. This rose does not bloom satisfactorily out of doors and many on this list so surpass it, even at its best, in colour, form and fragrance, that it is not by any means an essential rose in the garden.

Several rose growers class George Dickson and J. B. Clark as Hybrid Perpetuals although in England they are, perhaps unjustifiably, classed as Hybrid Teas. These should find their place in a list of the first ten.

In connection with this report Mr. Mitchell moved, seconded by Rev. Mr. Scott:

"That the Committee on Names and Varieties be instructed to prepare a score card system for judging at exhibitions of the Horticultural Societies, this work to continue from year to year, and that there be presented at the next annual meeting a report on the judging of roses, sweet peas, pæonies and spring flowering bulbs. That reports on these subjects be considered and discussed at the annual meeting at which they are presented, and, if approved, to be adopted by the Association, and that all Horticultural Societies be required to use these score cards in judging the respective classes at exhibitions and thus secure uniformity." Carried.

MISS BLACKLOCK enquired whether this list could not be had for next year's flower shows.

P. H. MITCHELL: It might be valuable for the exhibitions to have it, but it could not be made authoritative.

MISS YATES: Is there any authorized list of judges recognized by the Association?

DR. BENNETT: I do not think so. This is the Nomenclature Committee. They are experts along the line and could very well act as judges. In our local show we always have Prof. Macoun, and we feel we are on safe ground when we have a man of his stamp. Then we have Dr. Clark act at the Tulip Festival.

P. H. MITCHELL: It would suit me if the committee was authorized to go on with this work which it has already started on, and carry it out, as it is a big piece of work.

HORTICULTURAL SOCIETIES AND THE WAR.

REV. A. H. SCOTT, M.A., very ably presented the case in favour of an increased grant from the Government for the Horticultural Societies, pointing out their rapid growth in membership while of recent years the grant had remained stationary.

SIR WILLIAM HEARST, the Prime Minister and Minister of Agriculture, replied that the request would have very careful consideration on the part of the Government, and went on to express his great interest in the work which the Horticultural Societies were carrying on. Continuing he said:

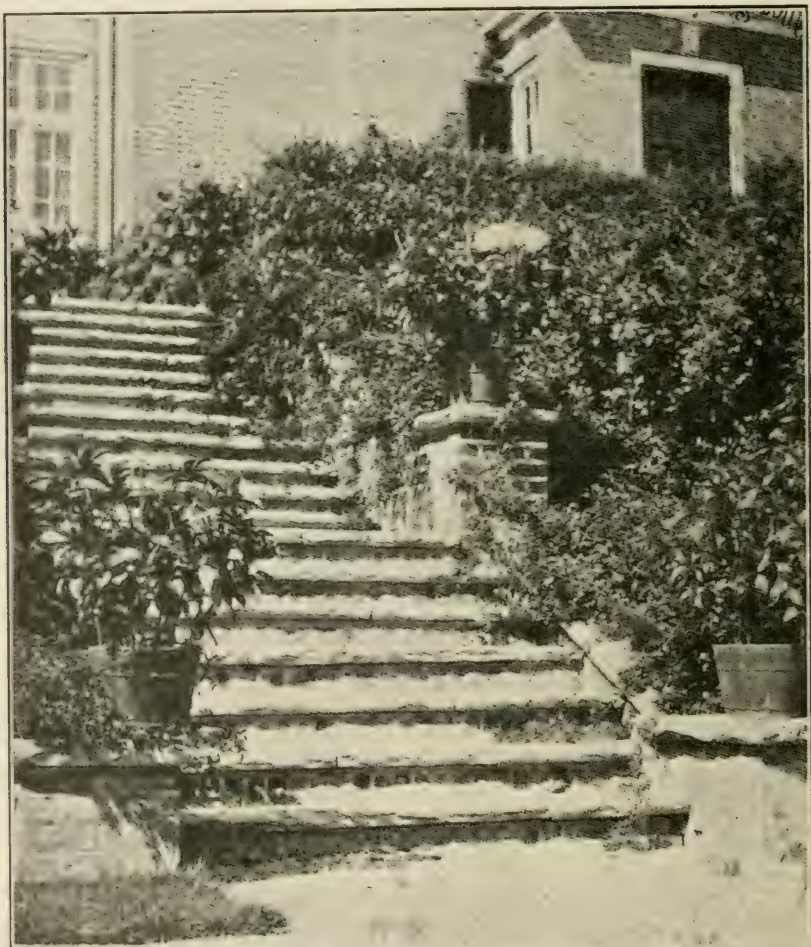
Who can adequately measure the importance of the work that you give your support to and your energy toward the furtherance of? Who can point out the real material advantage of beautiful gardens, well-kept lawns, hedges and shrubberies and of all that helps to beautify the community, the city, the town and the village? Who cannot appreciate the benefit of the changing of conditions that are often offensive to the eye and degrading to the sense of the community into those that are beautiful, uplifting and pleasing? Who can measure fully the material advantage to the city and town in which material changes of this kind are carried on? You often hear of the town or city which is spoken of as a beautiful place to live in, a beautiful place for the retired farmer to make his home in for the last days of his life and for those who are looking for a place of beauty to settle in, and, as a rule, you will find that what classes a city in that particular category is the work such as you ladies and gentlemen are interested in: the beautification of the lawns and parks, the cultivation of flowers, and everything that helps to make it pleasing to the senses and to the eye. I have in my mind a town which a few years ago was looked upon and spoken of as a barren place; an active and progressive community, but a place in which a man only lived because his business was located there. A Parks Committee was appointed in that town, and in conjunction with the Horticultural Society and those devoting their energy in the same line that you are, they acquired a small park, beautified it, obtained from the owners many waste places, and planted flowers and hedges along the streets that were barren before, and to-day, after ten years, that is looked upon as one of the beautiful towns of Ontario. But when you mention the material advantages, to my mind you have not at all summed up the whole story of the good that you do, because I think that work of that kind has a very great effect upon the moral and social life of the community in which it is carried out.

Did you ever see a morally degraded, a coarse man attending a flower show? Did you ever see a degraded man cultivating flowers with his wife or family? On the other hand, can you see anything more beautiful than a labourer, a mechanic, or a professional man, with his wife and family cultivating flowers on the front lawn or vegetables in the back garden, helping to make their town and city a better and a more beautiful place to live in? To my mind you cannot work in a better way for the advance of the moral and social status of the community in which you live.

I want also to extend my thanks to this Association and to the different organizations that are represented here to-day for the assistance and co-operation extended to the Government in our gardening campaign last spring for greater production. The campaign, I believe, had substantial effect, not only in affecting the cost of living, but above all, in providing foodstuffs that can be used by this population in order to export a greater amount to the mother country, which is so badly in need of food. You did a work that was substantial in that respect. Mr. Scott has referred to some of this work, and I know also the work accomplished in many sections of the Province along that line. We appreciate it and we ask for your help for next year, for even greater problems present themselves to us than a year ago.

That brings me to the point that I referred to a moment ago, the question that is before us to-day, that has been before us every day now for almost three and a half years—the war, and how we can bring it to a speedy and successful conclusion, and how we can bring home these war-scarred veterans—that is the day that we mothers and fathers look forward to. It is the day we must strive for

if we are worthy of being called Britons, for, bloody as the last three and a half years may have been, bloody as the days to come may be, we are determined to fight on and on until complete victory is obtained. The German military machine must be broken beyond repair. Germany must learn that it does not pay to make war upon a peaceful world; Germany must learn that the wages of sin is death.



Steps to garden of Miss Baldwin's house, Toronto.

What would happen if the Western line failed? That Western line is the only one that stands between the German and Britain. The Western line only is protecting the women and children of Canada from the atrocities of the Hun. At two of the most crucial engagements of the war it was your Canadian boys who kept back the foe. Who stopped the rush on Calais? It was your own Canadian boys. Are you going to leave them unreinforced, unsustained by every help in our power?

Now there is another important question to consider, and that is foodstuffs. It is one of the most serious. You know as well as I do, the reason of the world's

shortage of foodstuffs. You know practically the only hope of foodstuffs is the North American continent. The lack of tonnage make it impossible to get foodstuffs from the Argentine and Australia, so are we going to supply the necessary food to maintain the morale of the army in the field? We cannot maintain it unless we accomplish three purposes—greater production, greater economy and conservation of food at home. To these we must put every energy.

Those of you from the rural communities know the difficulties last year. The harvest was late, the opportunities for preparing the seed beds for the next spring were not as good, and now the difficulties are greater even than a year ago. The question of help is aggravated instead of lessened. These difficulties are very great. In that respect mistakes have undoubtedly been made by the local military tribunals in taking men off the farm that should not be taken. From that there is an appeal and I have been assured that the greatest liberality would be given in connection with these appeals, and, so far as possible, justice may be done in that respect and in every other respect in the selection of the men that are being taken for overseas at the present time. But no matter what is done, we understand the difficulties. We can only solve them by the active co-operation of the men and women of the towns. We must forget class prejudice and remember that we are Canadians, and that we must work hand in hand and shoulder to shoulder until victory is ours. I know that the burdens we are putting upon the rural sections in this Province, the calls that we are making on farmers, are great. It is very hard to discharge the burdens that we are putting upon them, but when we think of our burdens, my mind goes overseas and I think of the sacrifices they are making for us. Think of the second battle of Ypres, when the fate of the world was in the balance what did your Canadian sons do? Day in and day out, without food and drink, they held the line. They were Britons. They could die but they could not yield. Surely we should be ready to labour and sacrifice for them in order that we can display something of the spirit that they display.

THE CHAIRMAN: I will ask Mr. Scott to reply to this most excellent address from Sir William Hearst, the Premier of the Province.

REV. A. H. SCOTT: If I knew the innermost workings in the minds of the members of this assemblage I am sure that the first expressions from the chair and from the auditory would be those of appreciation of the admirable and the timely presentation of the Prime Minister.

As an Association there comes to our minds just now a sense of reciprocal compliment. We compliment the Premier of this Province on the fact that he is so intimately associated with us in the service for Canada for which this Association and this Convention stand. And we compliment ourselves that we are so closely identified in heart and purpose with the Premier who is at the head of the Department whose interests are bound up with our own. The first minister, like some more of us, has been in close touch with the war. He has made a contribution from his family to the fighting forces of the day. And as not a few of us in this Convention have given one, two, and three of our sons to the cause of honour at the front, there is something that makes us kin when the bullet has done its work, when blood has been shed, and when the soldier's grave speaks to us of the cruelty of war. From all walks of life our representatives have gone overseas. We are thinking of them, we may speak of them here. By the service of warfare our purposes are unified, no matter in what sphere our activities play in our Ontario homeland. May we have strengthening in the thought that ours is a

Cause in the interests of national honour, and that victory will perch upon our banners in God's good time.

The members of this Convention are more than pleased that in the gentleman who has just spoken to us so forcibly we have conjoined the Premiership of the Province of Ontario and the headship of its Department of Agriculture. It has never been so before in my memory. It seems to me a pre-eminently fitting conjunction. Premiership is enhanced by historic dignity through living touch with the first employment of man. If two distinctions in state must be carried by the first minister of the Crown here in our guest of the hour, we have one who is honoured above his fellows. When in other provinces of the Dominion the time comes for the apportionment of portfolios, my expectation is that they will copy the example of the Province of Ontario, and if the exigencies of the state require a Premier to head a dual department my wish would be that the dignified and historic service of the soil should occupy in the estimation of the electorate a place close up to that which is occupied by the chief of the executive of the realm.

We are happy this morning inasmuch as we have the assurance that the Premier is not only tacitly in sympathy with our cause, but is a leader and guide in those enterprises that make for the pleasureableness and productivity of the soil. He has spoken to us forcefully and beautifully. In presenting my argument to the Convention I wished the Premier and the Convention to be convinced that there was no flaw in the reasoning. The first minister's plea is a strong one for greater production to secure victory in the war. The Government's money, increased per annum, as we trust it will be from this time henceforth, added to our own money, which we will try to make larger than it is at present, will certainly secure for us a set of machinery which we will strive to use economically and enterprisingly.

I desire now to move that the very kindest expression from this Convention of the Horticultural Association of the Province of Ontario be extended to the distinguished visitor who has addressed us to-day, and that we wish for him all manner of good things personally, legislatively, and in every way that pertains to the progress and prosperity of our own Province and of Canada.

The motion was seconded by DR. SILCOX, and carried amid applause.

SIR WILLIAM HEARST: I appreciate very much indeed the very kind vote of thanks. Such a vote was not at all due to me. It was not only a pleasure to come here, but it was also a duty to come if I could be of any service in so doing.

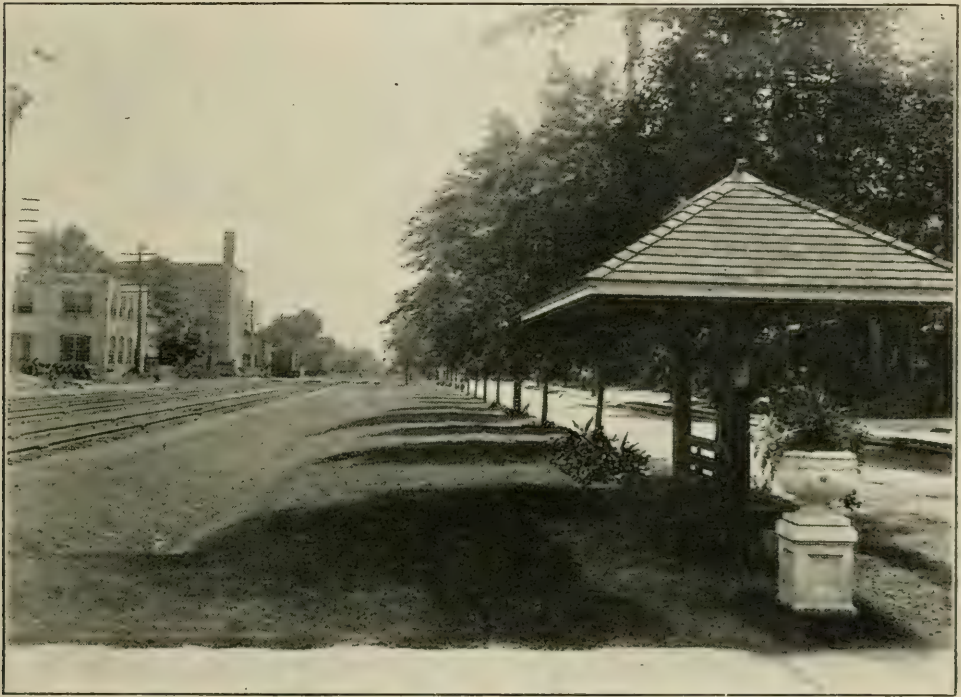
GEO. SIMPSON: I wish to emphasize one point that has an important bearing on our appeal to the Government at this time. I apologize for introducing figures into this discussion, but my justification is that they show in a concrete way what we are doing and what the needs of the situation are. I have before me the balance sheet of the Ottawa Horticultural Society for 1917. We received a Government grant of \$535, but we expended upon our work \$2,463. About \$2,000 of our expenditure was contributed by our members and other citizens of Ottawa. This shows that we are trying to do something to help ourselves. Incidentally I may mention that almost \$1,500 were expended in the free distribution of planting material.

That is one point, but it is not the principal one I desire to make. In this time of stress and food shortage, increased production is imperative. Through the instrumentality of the Horticultural Society and with the co-operation of other organizations, the Ottawa Vacant Lot Association was organized and set in motion. In the face of all kinds of difficulties and despite prophecies of disaster, it went

ahead, placed 101 acres under cultivation, and with an expenditure of \$2,400 secured a production of \$26,000. This production and expenditure is independent of and in addition to that of the Horticultural Society, and takes no account of the activities of the hundreds of producers not connected with either organization.

To sum up, of an expenditure of approximately \$5,000, the Government contributed \$535, or about one-tenth.

It is not on the grounds of civic beautification and improvement—important as these things are—that the Ontario Horticultural Societies appeal to the Government at the present time, but because of the urgency of the need of greater production and of the necessity of supporting the efforts of those who are engaged



Boulevard along M. C. R. tracks, St. Thomas, maintained by City and Railroad, and beautified by the Horticultural Society.

in this patriotic work. Horticultural Societies and Vacant Lot Associations all over the country are ready and willing to do this work. We invite the Government to make active use of them.

WM. HARTY: There is a point that was not brought up: the grants to the older societies will be decreased on account of the new legislation by the Government allowing Township Societies to organize with a membership of twenty-five. I am in touch with a number of township councils that are very anxious to get a society organized in their town, and I am pleased and delighted to think that our Government has given that privilege and that these people are to have their societies; but I think that the Government should increase the grant so that the old societies may not suffer.

J. LOCKIE WILSON: The township societies that are being organized and will

continue to be organized down through the years can participate in the grant up to \$800. Every Township Horticultural Association is put in exactly the same position as the Toronto Horticultural Society. What the Government should do, having brought into being this new regulation, is to provide for these new incoming societies and not lessen the grant to the older ones.

MR. DOWNING: I would suggest the appointment of a committee of some of the Toronto members on the San José Scale question. That matter might be left in the hands of our Superintendent, to bring it to the notice of the Department of Agriculture and request that the Act be made to read "must" instead of "shall" in connection with the inspectorship.

J. LOCKIE WILSON: There should be a resolution from this Association.

MR. DOWNING: I would suggest that you appoint a committee of the Toronto members who are close at hand and who would go up and put that resolution before the Government. There is another thing in connection with the Horticultural Societies, and that is the fact that we have heard the several papers dealing with the School Children's branches of our work. I come from the City of Kitchener, and we have taken up there for the last three or four years work among our school children, and we have instituted what we thought was a wise thing, a membership fee of ten cents which we give back to the children in seeds, but we have no recommendation of the department of that branch of our work, and I think it would be a good thing if we could have incorporated in our annual report the amount of work that is done by the school children. I was very pleased yesterday to hear from the school teachers on this subject. I have had the greatest possible difficulty to get any assistance from our school department. Last year we went to the trouble of having our principal put on the board of directors, and he woke up quickly to the fact that it was necessary for a little more to be done by the school teachers to get results. We published a little pamphlet which was supposed to be handed to each of the children, and in only one instance could I find a child who had ever received that pamphlet, and I think there were 2,000 scattered through the city, which goes to show that the teachers were not very much interested.

C. D. BROWN: This work among the school children is one of the most important things that any of the Horticultural Societies could undertake. A few years ago our local Horticultural Society commenced giving seeds to the school children. We had many difficulties, but we had had a good example set for us in the cities of Detroit and Windsor, and we have been following them. The system is to have a large envelope printed with the names and varieties of seeds which you are going to give to the school children. This envelope has also a place for the child's name and address. The envelope is about four inches wide and possibly six inches long. These envelopes are distributed in the class rooms and the teachers undertake to see that each child gets one. The child marks on the envelope what kind of seed he wants and how much, and the amount of money is put into the packet and sealed up and put in the large envelope. These are collected by the teachers and handed to the Horticultural Society. We had this year in our town about 8,000 applications for seed packets. It is only a small town of 8,000 population. The children pay one cent for each packet. There is a lot of work in connection with getting these seed packets out, and it occurs to me that perhaps this Association might standardize a system whereby every local Horticultural Society might get their seed packets. There is no question but that, if we could centralize a source of supply, it would decrease the cost. It was a tre-

mendous undertaking for the local society. There were correspondence and trips to Detroit, and it entailed a lot of work. We got our seed packets from the Eastern States. It seemed unusual to go that far, but the difference in the seed packets as quoted by the Canadian houses and in Massachusetts was very marked. We got our seed packets for sixty cents a thousand, and by ordering 40,000 we had the printing done for fifteen cents a thousand. Now, if all the Horticultural Societies could get their seed packets from one central point, we could get them very much cheaper. These packets were sent to a local seed house, and they filled them for us and charged us for the seed at so much a pound. We were then able to sell these packets for the children at one cent a packet and still lose very little on the cost of the seeds and packets. The work, of course, of the members of the Society was free.

The election of officers resulted as on page 6.

It was moved by MR. WEBBER, of Hamilton, seconded by E. E. KILMER: "That subject to the approval of the executive, the next year's Convention be held in Hamilton, and single fare rates be obtained there." Carried.

DR. BENNETT assured them that the executive would give the matter every consideration, and briefly thanked the members of the Association for all the courteous treatment accorded him in the past.

PARKS AND PLAYGROUNDS.

DR. S. SILCOX, STRATFORD.

These two are related in much the same way as man and child. Man needs parks; the child needs playgrounds. The child who learns to make a wise use of playgrounds will know how to use parks. Of course parks are more than playgrounds. They are recreation areas. As the main feature of a playground is to provide a means of activity for the child, so the main feature of a park should be to provide mental distraction for man. Thus a park should provide areas for all kinds of adult games, and, in addition, such landscape features as trees, flowers, etc., to occupy the mind of the weary business man. A part of a park may furnish a good site for a playground for children, especially in summer. On the whole, therefore, parks must be considered in relation to the adult community and playgrounds to the child community.

THE VALUE OF PLAY.

(a) Play secures the best kind of physical activity because it is pleasureable exercise.

(b) It requires frequent judgment of time, distance, mode of action, etc., and these train the mind.

(c) It develops social spirit, because all play is with groups of two or more children.

(d) In play the child learns the meaning of fairness. Later, he will apply this in work, so that play is the beginning of the development of moral character. Play needs to be supervised in order to secure fairness; otherwise it is likely to be immoral in its effect.

PLAYGROUNDS.

Many people are inclined to look upon the modern playground as a fad taken up by busybodies for their own aggrandisement. But observation of children in urban centres discloses their tendency to congregate in somebody's front or backyard or house or verandah. Young children will not go far; as they get older they range over wider and wider areas. Hence, the playground is an expression of a real need of child life.

Observation has revealed another important fact, namely, that *every playground is already supervised*. The supervisor is usually one of the children, the oldest or most mature boy or girl present. Usually this self-assumed supervision eliminates the kiddies, who are, however, allowed to sit around the outside and watch the seniors play. Unfortunately these supervisors have not the right view of playgrounds as they are naturally selfish. By establishing and supervising playgrounds, adults are simply proposing to improve upon existing conditions. They can secure better located and equipped grounds, and can also secure better supervisors who will see that all the children, old and young, have equal opportunities. Harmful conditions are eliminated and good conditions strengthened by good supervision of children's playgrounds. They have these supervised playgrounds everywhere now; the only question is, "Shall we improve them?"

A good supervisor will, of course, know the value of free play; of equipment; and of organized games, and will secure all of these in proper proportion. Little equipment is required. Boys like to "skin the cat" on some convenient pole, to hang from limbs, and to swing, but good games are always preferred to these individual stunts. A shady playground, without any equipment except a sand pile and a few bars, could be made a most interesting place for children. In fact, it is only in games that the full value of play as already stated is secured.

There have been supervised playgrounds that failed. Little wonder when so little is known about their successful management. There is no doubt that the success of playgrounds depends upon experienced supervisors, and we have not yet had many of these in Canada.

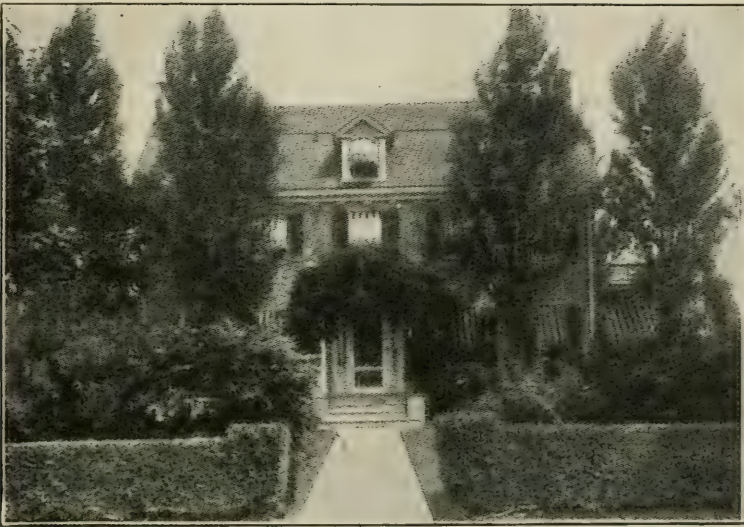
Who should control playgrounds? Undoubtedly, in the interest of education generally and of economy, the School Board should take full charge of playgrounds and finance the whole movement, as part of their regular work. True, they are usually started by private citizens who support them by private contributions. But these privately directed grounds are nearly always on school playgrounds, and the School Boards have to take them over in self-defence because it is impossible for two bodies to use the same plant. The ideal condition is that which obtains in Gary, Indiana, where the playground exercises are part of the day's schedule of school work. The objection of Tammany in New York to the Gary plan does not affect the situation at large, but it is unfortunate for New York City and for the plan that Mayor Mitchell introduced the Gary system so near an election. What has been done in Canada?

Mr. S. H. Armstrong, Director of Recreation, Toronto, has kindly furnished me the following statistics on playgrounds in Canada:

Playgrounds.		Playgrounds.	
Toronto	11	Calgary	1
Ottawa	7	Halifax	7
Montreal	11	St. John	12
Hamilton	3	Truro	2
Peterboro	1	Belleville	2
Winnipeg	32	Brockville	2
Fort William	7		

Stratford had three playgrounds, but war conditions have led to their temporary closing. The bathing beach, controlled by the Park Board is in part a substitute for a playground, but it does not meet the need of the children in all respects.

What is needed in Ontario and in every Province of Canada or in any country? Simply this, that every school should have a playground, open the year round and supervised all the time. We are losing our greatest opportunity to know and to train children by neglecting the school playgrounds. The classroom work can be made much more effective by improving the play conditions and by supervising play activities. The wonder is that this is not yet realized among the great majority of our parents and teachers. We need a campaign of education among teachers and parents.



Lombardy Poplars used in a treatment of grounds.

PARKS.

Children need playgrounds; both children and adults need parks. Why? One speaker, John Dunbar, Assistant Superintendent of Rochester Parks, said before this Association in 1914: "Every wide-awake city nowadays realizes the fact that if it is to finally meet the needs of its corporate life it must develop park areas or its civic life will become stagnant. Parks are as necessary to city development as good public buildings, good streets and good water."

Now, good public buildings tend to more efficient civic government because the officials can do better work and better men will want to become members of the city council. Good streets are sanitary and attract residents in addition to making business more economical. Good water is essential to health. It is evident that parks have all these values. Moreover, they are valuable in connection with all kinds of schools as laboratories for nature study. Stratford Normal School is situated in a park of forty odd acres, with an artificial lake within it. There is more nature study work within half a mile of that school than can be mastered in a year. Moreover, these parks can be made arboretums like the one at

the Dominion Farm at Ottawa or the Arnold Arboretum at Harvard. Why not keep sheep in our parks as is done in Central Park, New York?

Parks give a wider vision for penned up citizens, improving vision.

They improve morals. Mr. Allen Burns says: "A small park can be expected to be coincident with a decrease of delinquency, within a radius of one-half mile of 28.5 per cent., conditions of the neighborhood in other respects remaining the same. To provide a probation district with adequate play facilities is coincident with a reduction of from 28 to 70 per cent., or 44 per cent. on the average."

Think of Toronto without High Park!

Think of Hamilton without the Gore and Dundurn Park!

Think of London without Queen's Park and Springbank!

Think of Ottawa without Rockcliffe and the Driveway!

Think of Vancouver without Stanley Park!

Think of Victoria without Beacon Hill Park!

We have national parks for the Dominion, provincial parks and municipal parks. Our National Parks are eight in number, the largest and most famous, Rocky Mountain Park, containing over 6,000 square miles. John Muir says, "Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wildness is a necessity; and that mountain parks and reservations are useful, not only as fountains of timber and irrigating rivers, but as *fountains of life*." Here then are the reasons for national and provincial parks. Even now with our sparsely settled country, Muskoka is almost too crowded for pleasure. What will it be when our population has doubled and trebled? Then Ontario forest reserves of 20,000 square miles out of 407,262 square miles or about one-twentieth of her area, will begin to be appreciated. Probably twice this area will be reserved by that time.

In addition to these national reserves we have the wood lot of five or ten acres on each farm, and this is not too much. Think of our landscape without these wood lots! Indeed, our country is really too much cleared of these wood lots, especially along our streams, which are flooded disastrously in spring and become dry beds in summer. Often our cities with their shady streets are more pleasant in summer than the country. How repelling some country homes are without a tree or shrub near the house! It is, I believe, generally recognized by experts that our waterways must be reforested in order to restore protection from floods.

It would not seem extravagant to say that one-twentieth to one-tenth of our city areas should be park land; that is, that a city covering 2,000 acres should have 100 to 200 acres of park land, at least. Few cities in Canada have anything like that proportion of park area. Stratford has, but Toronto has not, and never will have now. Queen's Park is pretty much built upon. High Park is not very accessible to most Torontonians. The Esplanade, now under construction will do much, with the Island, to give Toronto a respectable standing in park area. Rosedale Ravine can scarcely rank as park.

We need education in the direction of park expenditures. The Horticultural Association is the existing body that can carry on this propaganda in every centre where there is not a Park Board. A town or city council will not promote parks. A Park Board with its one duty and its powers of levying a half mill rate on the assessment will accomplish something to justify its existence. In proportion as it spends money wisely will the park spirit grow. Our Horticultural

Societies should encourage the formation of Park Boards and the Establishment of Supervised Playgrounds by School Boards.

PROF. CROW: What I shall have to say in the matter of playgrounds I shall treat from the standpoint of planting. Now obviously, a playground is not a place in which you can plant for pictorial effect or beauty, because a playground is made for use, every inch of it, and there is very little opportunity for flower beds, shrubs or other decorative features. To my mind playground planting may be very briefly stated: about the only things which are admissible on playgrounds are shade trees and vines on buildings. A great many of our school buildings that we saw in the previous speaker's excellent collection of pictures can be wonderfully improved by vines. Aside from that, about the only thing which you can have and very necessary it is, is the shade tree. In the shade tree class all of the evergreens, including the pines and spruce, are ruled out because they would not stand in competition with the healthy and numerous sports of the rising generation. The only trees that will stand are those that grow with a straight trunk like elm, oak, maple, etc., and I should think that the best playground tree is the American white elm. It is a highly robust tree that will stand a great deal of tramping, and of course when these trees are planted they are usually big enough to command the respect of the child. The elm tree grows tall and spreads away out high, which gives the maximum of shade and the minimum of obstruction on the ground.

As to shrubbery, flower beds, lawns, etc., in connection with playgrounds, these, if desired, must be located where they can be protected from the children. You may have noticed that in some of the St. Thomas school pictures that we saw a few moments ago, the school yard is divided into two about equal parts. The front part has the lawn, the flower beds, the background is the playground proper. That seems to me to be a very good working scheme, a very good idea indeed for a school ground. It is not necessary to have our school grounds absolutely bare and without ornamental features. If possible lay out a part of it in grass, the children not to be allowed to play on it, but about the only way to accomplish that in connection with school grounds is to have that part of it fenced. It does not need to be a regulation fence. In St. Thomas all they have is a line of gas pipes.

As to shrubbery, you can say the same thing as to flower beds. It is not permissible in a playground because it does not stand the racket. If you have a place for it where it can be protected and allowed to grow, that is alright, but the playground proper is not the place for even attempts at ornamental features.

PARKS.

H. J. MOORE, QUEEN VICTORIA PARK, NIAGARA FALLS.

At an important convention like this there is usually, on account of business matters, too little time allotted to the reading of papers, and much less to the discussion. With this in mind I will be as brief as possible and will but refer to a few important factors wherein we, if not exceedingly careful, make mistakes in the laying out and in the management of our municipal parks—mistakes which always lead to much unnecessary expense and to dissatisfaction with the work when it is done. The following are the factors to which I would refer:

ADVICE. What advice do you get when about to acquire and to lay out your parks? Is it born of experience, and is it of such a nature as will imbue the people of your city with confidence. Remember that any important work that is undertaken will either stand to the credit of those responsible, or as a monument to their folly. The greatest monument to the tact and intelligence of any municipal body is a properly laid out and spacious park. Always seek the advice borne of experience, and demand that the landscape architect (so-called or otherwise) show work that he has done in proof of his ability to advise.

LAYING OUT. The manner of laying out a park will depend largely on its location. If the surroundings are formal as for instance near a railroad station, or in the heart of a town or city, a formal or artificial layout will be proper, and in accord with other work done by man. If, however, a large tract of land has been wisely purchased, it may be laid out informally even if later surrounded by streets, provided that it is of such a size as not to lose its dignity by the



Where the cool fountain plays.

association of that which is artificial. Did it ever strike you that many cities destroy (by building upon) their beautiful natural ravines and park lands which lie all around them, and later spend millions of dollars in providing an artificial substitute for that which is natural?

Along a river or on undulating lands as ravines, which are peculiar to many Canadian towns and cities, the treatment should be entirely informal. Whoever but the most ignorant would ever dream of laying out these God made places in a formal way, and so for all time spoiling their grace and dignity, so much so that they are beyond the redemptive power of human hands. Have you ever seen Parked Boulevards which should have been natural, spoiled by gaudy flower beds and geometric designs, and at considerable expense? I have. I refer to boulevards which are not flanked by houses, streets and sidewalks. These latter should be treated formally.

CHOICE OF SUBJECTS. This important phase of the subject requires careful thought, for in all schemes of beautification a right or wrong choice will make or mar. From our natural schemes, let us leave out all highly colored and gaudy exotics. I have seen the sides of ravines and hills in certain cities daubed with trees and shrubs of various shapes and colors, some of them, even the evergreens, cut to grotesque shapes and these in places where previously infinite harmony existed. Unfortunately the finite mind would not or could not understand.

As a general rule we should use native subjects in our natural parks. When these are impossible to obtain we may substitute the more modest exotics. In our formal parks we may display color and plant exotics freely for this is their place. Why in the past we have used so many exotics in our natural schemes, when native material is so abundant and beautiful, I cannot understand. This practice has done much and unless it is stopped will do much more to untypify our natural parkings, and lower the dignity and the grandeur of the natural environment of our cities. We ask no substitutes for that which is Canadian. Let us, therefore, have a school of Landscape Architects which will recognize in the creation of our parks that informal parkings differ from formal ones, and that to introduce formality, and foreign subjects into informal and natural positions will but outrage the sense of harmony and impair that which was naturally beautiful.

The choice of subjects for special positions is also a very important matter. Sometimes material entirely unsuited to a locality is chosen. For instance, near factories or large railroad stations, trees are planted which will not withstand the smoke and fumes. A careful consideration must be given these matters or failure in our attempt to beautify these oftentimes unsightly places will ensue.

PROF. CROW, of Guelph, here suggested that the Convention hereafter be lengthened out to a three-day session instead of a two-day one, as he said members went back home disappointed because time was not given them to discuss various subjects in which they were interested. Moved by PROF. CROW, seconded by H. J. MOORE, "That in future this Association's convention last for three days instead of two."

E. E. KILMER: The executive for last year discussed this matter for some time before this meeting was arranged for to-day. I have no objection to your having a week's meeting if you like, but there are a number of small societies throughout the country which send representatives here with the idea of getting information, and these people will not come to a three-day convention. It is too expensive. I think the same object could be secured, however, by reducing the programme and you can get more representatives from the class of societies that you want to be represented.

The matter was left to the Executive and Mr. Dockray assured Mr. Crow that they would give the matter their earnest consideration.

REPORT OF COMMITTEE ON A NATIONAL FLOWER FOR CANADA.

The following is the report respecting the steps which have been taken by the Ottawa Horticultural Society to obtain for Canada a National Flower.

During the past summer a small committee of this Society took the matter up with a view to bringing its findings before this Convention. A motion was also

made at the last annual meeting of the Ottawa Society and carried unanimously to the following effect:

"That this Annual Meeting of the Ottawa Horticultural Society respectfully requests the Ontario Horticultural Societies to take such steps as they deem wise to secure for Canada a National Flower."

On the 14th inst. I also received a letter from the Society in which I was requested "to bring the question of adopting a National Flower for Canada before the Convention of the Ontario Horticultural Association, meeting in Toronto next week."

On behalf, therefore, of the Committee and of the new directorate of the Ottawa Society it gives me pleasure to report as follows:

When the original committee was appointed the motion empowered the committee to increase its numbers by inviting others to join it who would be able to assist from a botanical or scientific standpoint, and it was thought that such a committee would then form the central committee to deal with this question of a national flower. Up to the present these gentlemen have not been formally invited to join with the original committee, but several of them have signified their willingness to do so, should this Convention adopt this report. It is also hoped that provincial committees may be formed to consider the question of provincial flowers.

There are two aspects of the question which deserve special mention before details are discussed. The first is that this question of a national flower is one which interests, besides horticultural societies, other bodies of individuals, such as botanical departments of universities, educationalists and students of colleges and schools. It is, therefore, felt that, to a large extent, such would be more easily approached through this central committee, and, with that point in mind, the committee has already written to the Minister of Agriculture to obtain governmental support for the question and to obtain permission to use "The Agricultural Gazette" as one means of getting into touch with educational institutions, etc.

The other aspect which it is desirable to emphasize is that the initial work should be undertaken by the horticultural societies, because they are naturally trustees of the nation's sentiments in such a matter. They should, therefore, take immediate steps to see that the burial grounds in Flanders of Canadians who have fought and died that we might retain the right to possess national sentiments and ideals, are made spots where native flowers shall blossom and remind those who visit those burial grounds of the glories and beauties of the country for which the dead gave up their lives, and that, amongst the burial places of those honored dead, those of our sons shall be suitably clothed and perfumed with simple but enduring tributes from the homeland.

A NATIONAL FLOWER FOR CANADA IS DESIRABLE.

A National Flower for Canada is desirable for many reasons. Amongst such reasons the following are conspicuous:

1. Nearly all other countries have national flowers.
2. A national flower signifies *national* personality and sentiment.
3. As a national emblem it becomes, like a nation's flag, the golden cord binding together historic events and national incidents.
4. It has a definite value similar to the value of a state seal.
5. The selection of such a flower will encourage an increased interest in Canada's wonderful flora.

6. A national flower on the graves of fallen Canadians in Flanders will be as a perpetual banner over our noble dead.

For the purpose of obtaining the national mind as to which flower should be selected for this purpose the following plan is suggested.

A. The presentation of the claims of certain flowers to as many individuals as possible.

(1) Through horticultural societies, educational institutions, etc.

(2) Through the medium of the press.

B. By means of local committees named or appointed by horticultural societies and educational authorities.

C. The will of the people expressed in a majority vote to form the basis of definite action.

(1) Through a central committee at Ottawa.

(2) Which, in turn, will hand over its work to a Minister of the Crown to deal with the matter through legislative enactment.

WHICH FLOWER DO YOU FAVOR AND WHY?

The national flower of a great country like Canada should be:

- 1. Native to and typical of the Dominion of Canada.
- 2. An attractive flower and fairly well known.
- 3. Easy to grow in most localities and types of soil.
- 4. Easy to propagate.
- 5. A flower with a blooming season extending over a long season.

HOW THE FOLLOWING FLOWERS COMPARE ON THIS BASIS:

Name of Flower.	Native.	Attractive.	Easily Grown.	Propagation.	Season of bloom.
Columbine	To all parts..	Very	In most soils..	From seed....	Averagely long.
Perennial Aster. ....	.....	As an autumn flower	In all soils....	From seed and root division	Long season.
Trillium.....	To nearly all parts	As a woods flower	In moist loam.	From roots and seed	Rather short.
Iris (Flag).....	To some parts	Very	In all soils....	From root division	Averagely long.
Delphinium	To many parts	Very	In garden soil.	From seed....	"
Peony	Not native...	Very	In rich soil ...	From root division	"

Any other one of the following: Canada lily, Anemone (wind flower), lady's slipper, goat's beard (spiraea), violet, twin flower (linnaea).

I prefer the
(Name your choice.)

THE COLUMBINE.

Botanical Name: Aquilegia, pronounced, Ak-wil-ee-ji-a.
Crowfoot family. Near relatives, the buttercup, hepatica, larkspur. Canadian species, Aquilegia canadensis and three varieties of the same.

Distribution: Native to rocky places and open woods throughout Canada, widely distributed.

Adaptability: Can be adapted with success to nearly all soils and localities. Does well under garden cultivation. Easily raised from seed and the young plants can be transplanted with success. Many hybrid varieties resulting from crossing native and European species are now in cultivation. Colors many and beautiful. Season of bloom, May to July.

Interesting Notes from its History: The name columbine is supposed to be derived from the Latin *columba*, a dove, owing to the fact that a detached petal with the attached sepals resembles a dove with expanded wings. The name aquilegia, on the other hand, is traced by some to *aquila*, the eagle, by others to *aguilegus*, water holder.

The columbine was used in heraldic devices as far back as 1565. A beautiful yellow variety from California (*chrysantha*) and another blue and white variety from Sibirica (*glandulosa*) have been used to produce many beautiful hybrid varieties of modern introduction.

ASTER—MICHAELMAS DAISY.

Botanical Name: Aster.

Composite family. Near relatives, China asters, sunflowers, *chrysanthemums*.

Canadian Species: Many of the best of the genus.

Distribution: Widely distributed over Canada from coast to coast.

Adaptability: Will grow in almost all types of soil and in most localities. Easily raised from seed or increased by division of the root. In flower during September and October.

Interesting Notes from its History: The Michaelmas daisy or Starwort is the real aster. It is native to the North American continent, although there are species which are native to Europe. The annual flower, known as the China aster, has to a large extent overshadowed the native and true aster, but Canadian woods would look altogether different in the autumn were the beautiful colors of the Michaelmas-daisies missing. Although seen at their best in October some varieties commence to bloom in August and the genus last in bloom until November. They greatly improve in habit under garden cultivation, and are amongst the best of the hardy perennials giving autumn bloom.

THE IRIS—FLAG—FLEUR-DE-LIS.

Botanical Name: Iris.

Iris family.

Species Native to Canada: *Versicolor*, *setosa* or *canadensis*, *lacustris*.

Distribution: Southern parts of Canada from coast to coast.

Adaptability: Can be grown in almost any soil or locality and the modern hybrid varieties will succeed under almost any conditions. One of the most adaptable plants grown. Does well in town gardens. Propagated by division of the roots or offsets. Easily transplanted. Season of bloom extends from April till July.

Interesting Notes from its History: Iris (Greek Rainbow) is widely distributed over the earth. It is a very old garden plant and occupies a prominent place in literature. There are about 176 species of irises known to botanists. There is a great diversity of color amongst them owing to their diversity of origin. The types

are also very different. Japanese irises do not bloom till all other varieties are some weeks past. There are about twenty species of bulbous iris, notable amongst them being the English, Dutch and Spanish.

Orris root is manufactured from the variety *florentina*, the Florence Iris introduced into Britain in 1596.

THE TRILLIUM OR WAKE ROBIN.

Botanical Name: Trillium, pronounced tril-li-um.

Lily family. Near relatives, lily, lily of the valley, Dog's tooth violet.

Canadian Species: *Grandiflorum*, white, *erectum*, reddish brown, and *undulatum*, the painted trillium, white and purple stripes.



Geranium.

Distribution: Native to cool, damp woods. Prefers fairly rich, moist, cool soil and partial shade, but will succeed in open borders and in the partial shade of buildings. More successfully propagated by means of young seedlings, or mature plants may be transplanted from the woods. Flowers in early spring, generally April and May.

Interesting Notes from its History: The trillium is native to Canada and probably has the same characteristics to-day as it had when the red man was the only human being to walk through the glorious carpets of white which a colony of trillium grandiflorum formed in the early days of spring. Rich woods in the southern parts of the Dominion abound in such colonies. The name comes from *tres*, three; all parts of the flower being in symmetrical threes.

The flower has not been used in the work of plant breeding, although plants brought from the woods and well cared for will produce larger flowers than any to be found in the wild state.

There are twelve species native to North America and a few native to Asia.

DELPHINIUM—LARKSPUR.

Botanical Name: Delphinium, pronounced del-fin-i-um.

Crowfoot family. Near relatives, the columbine, hepatica, buttercup.

Canadian Species: Delphinium exaltatum, Penardi and others.

Distribution: Many parts of southern Canada from coast to coast.

Adaptability: Prefers a good rich garden loam, but does well under many conditions. Is one of the hardiest of handsome perennials and the annual forms succeed in all parts of the country. Colors are mostly in shades and tints of blue, although the annual forms are to be had in several other colors. Easily raised from seed or seedling plants. Season of bloom June and July.

Interesting Notes from its History: The name in the Greek is *Delphinion*. Larkspur, so called from the spur formation of calyx and petals. Botanists trace it also to *delphin*, a dolphin, from the supposed likeness of the spur to a dolphin's head. Other common names for the Delphinium, not now in use, are Lark's heel, Lark's claw and Lark's toes. Shakespeare used the former.

The annual varieties are generally claimed as British productions, being derived from the two species *ajacis* and *consolida*. There are about four species native to Canada and four introduced species also found growing wild.

The perennial Larkspur (delphinium) is from several Siberian species, an Italian species and the hybrid species *formosum*. Delphiniums are very valuable border plants and many glorious hybrid varieties are often the pride of the border in mid-summer.

THE PÆONY.

Botanical Name: Pæony, pronounced pe-o-ne.

Crowfoot family. Near relatives, the columbine, buttercup, larkspur.

Distribution: Although not native the pæony is grown in nearly all parts of Canada.

Adaptability: Can be grown with success in nearly all parts of the Dominion. Succeeds best in a deep, rich and rather moist loam. Needs a liberal supply of water at all times. Plants are propagated by division of the roots. Flowers produced during May and June.

Interesting Notes from its History: The pæonies are natives of Europe and Asia. Pæonies were introduced into Britain in 1548. They are now the most noted of all border plants. Vigorous in growth, hardy in constitution and bearing flowers in great abundance they hold a place unsurpassed by any rivals.

The name is derived from Pæon, a physician. Peony and piney are older names for pæony. Pæony moutan is the tree form from China. *P. Brownii* is the only form native to North America. There are altogether about ten species and varieties by the hundred.

LIST OF FLOWERS USED AS NATIONAL OR STATE FLOWERS.

Flower.	Country.	Flower.	Country.
Rose.....	England.	Moccasin Flower.....	Minnesota.
Thistle.....	Scotland.	Magnolia.....	Mississippi.
Shamrock.....	Ireland.	Bitter Root.....	Montana.
Blue Flag or Iris.....	France.	Goldenrod.....	Nebraska.
Saguara or Giant Cactus.....	Arizona.	Sagebrush.....	Nevada.
Apple Blossom.....	Arkansas.	Cactus.....	New Mexico.
Golden Poppy.....	California.	Rose.....	New York.
Blue Columbine.....	Colorado.	Daisy.....	North Carolina.
Mountain Laurel.....	Connecticut.	Wild Prairie Rose.....	North Dakota.
Peach Blossom.....	Delaware.	Scarlet Carnation.....	Ohio.
Orange Blossom.....	Florida.	Mistletoe.....	Oklahoma.
Cherokee Rose.....	Georgia.	Oregon Grape.....	Oregon.
Syringa.....	Idaho.	Violet.....	Rhode Island.
Violet.....	Illinois.	Pasque Flower.....	South Dakota.
Carnation.....	Indiana.	Bluebonnet.....	Texas.
Wild Rose.....	Iowa.	Sego Lily.....	Utah.
Sunflower.....	Kansas.	Red Clover.....	Vermont.
Trumpet Vine.....	Kentucky.	Rhododendron.....	Washington.
Magnolia.....	Louisiana.	Rhododendron.....	West Virginia.
Pine Cone and Tassel.....	Maine.	Violet.....	Wisconsin.
Apple Blossom.....	Michigan.	Indian Paintbrush.....	Wyoming.

Twenty-five of these flowers were declared state flowers by legislative enactment, while ten were made so by common consent, and seven others by choice of the school children.

This report is signed by:

F. E. BUCK, Experimental Farm, Ottawa, Chairman of the Committee.

J. B. SPENCER, Chief of the Publications Branch, Ottawa, Corresponding Secretary of the Committee.

GEO. SIMPSON, Ottawa, President of the Ottawa Horticultural Society.

Moved by F. E. BUCK, seconded by T. D. DOCKRAY, Toronto, "That this report be adopted by this Convention as the basis of action to obtain for Canada a National Flower." Carried.

FRUIT IN THE SMALL GARDEN.

P. H. MITCHELL, TORONTO.

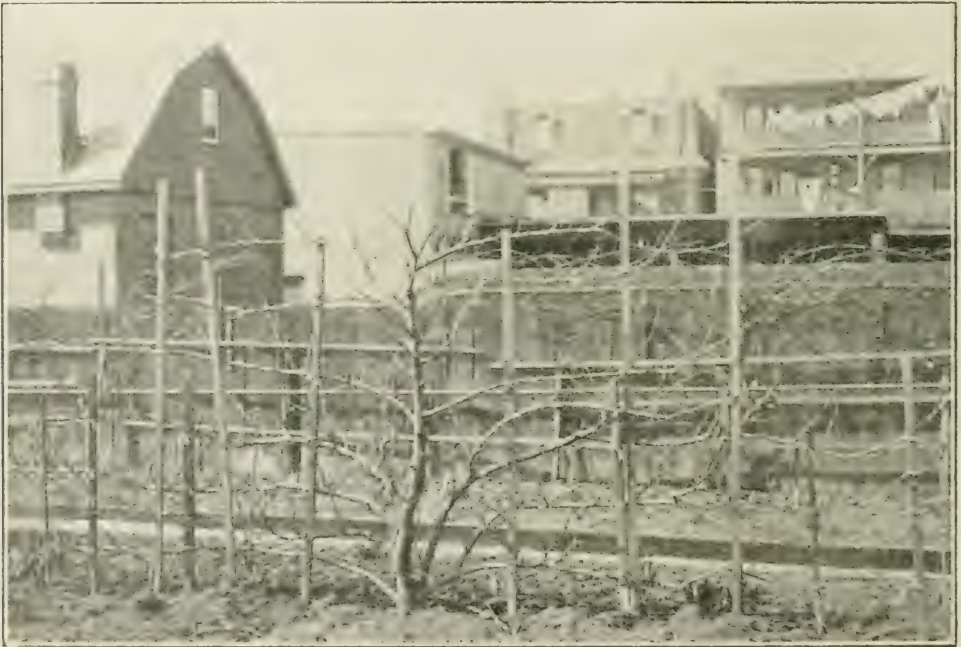
Fruit growing in the small garden is supposed to present difficulties impossible to overcome. An enthusiastic fellow gardener always attempts to frustrate my most cherished plans of intensive gardening by asking, "What about my sixteen foot lot?" But I have him there, because he can still grow his apples, his pears, his cherries, and plums and indeed leave room for the roses which he must grow, and all his perennial favorites, and, while not leaving a spacious lawn, there will still be a touch of green.

There was no fruit ever bought which can equal in flavor the fruit grown on your own lot. Can you buy Columbia Purple Raspberries in the stores? Those great luscious, juicy berries cannot be put in boxes as the juice runs out of the cracks, yet these, growing six feet high and held within bounds by tying to a light frame or trellis take up but little room. The Cuthbert Red Raspberry must also be picked within the hour before used on the table and must not absorb the taste of the wooden box. Blackberries, which, like the Purple Raspberries, form such grace-

ful bushes, are extremely prolific, and even one bush is worth while just to prove that a blackberry is red when it is green!

And Gooseberries! Why use the hard bullets of green, sour fruit? The great red English gooseberries are not a mythical impossibility. Industry can be obtained everywhere, is enormous, sweet, juicy, prolific and most invitingly red. May Duke is larger still and is my own favorite, and can be purchased in Toronto.

Currants, red, black and white: it is a matter of taste how extensively you require these. While I now grow Boskoop Giant black currants, Fay's Prolific red and Bar-le-due white, which are the best varieties grown here, I will eventually confine the garden to Boskoop Giant and both red and white Bar-le-due currants. These latter are practically seedless, are prolific and hardy, and excel for use in jam on account of the comparative seedlessness.



Espalier training of Apple Tree for a small garden.

And now for the orchard. Yes, and on the sixteen foot lot, if you want it. For centuries apples, pears, plums, cherries, and other fruits have been grown on trees trained as cordons, or espaliers. The cordon is merely the dwarfed tree trunk carrying fruiting spurs without branches and the espalier has opposite horizontal branches spaced about a foot apart from the ground up, and each branch carries the fruiting spurs. Each tree is tied to wire or trellis supports. Other variations of trained fruit trees are the fan-shaped and the double cordon or U-shaped tree. While these can be trained into form in the garden the most satisfactory are imported from England and France. The trees are quite cheap in cost, bear immediately and, while the fruit is limited in quantity, it is unexcelled in quality.

Apples and pears are successful as cordons or espaliers; cherries are best in fan-shaped trees, as that form will allow a more rampant growth; plums are more confined to espaliers, as, when a cordon is kept to true form it cannot have the side stub growth required for plums.

Cordons are best grown in a slanting position, say at 45 or more degrees against a high wire fence, a trellis or solid fence or wall. They may be planted two feet apart and when inclined against a six foot fence they can grow over eight feet long; such a tree should be kept down to about twenty fruits, and at this they are certainly worth while for their quality is unequalled.

Espaliers and fan-trained trees will usually be kept down to fence height, say six feet, and would then be kept about seven feet in width on the fence.

In my own garden the easterly boundary is of light trellis work between six and seven feet high and consists alternately of a narrow panel about eighteen inches wide and then a wide panel seven feet across. On the wide panels are Duchess, Astrachan and Yellow Transparent apples in espalier form; on the narrow panels are cordons of pears and also one plum. On other places in the garden are gooseberry and white currant cordons. All were planted in the spring of 1916, and in the summer of 1917 all bore well excepting the one plum cordon, and all have filled their allotted spaces.

The success of these trees and the possibilities of so many in a small space make my intention fixed that some day our garden of the future will have space for many such fruit trees as these. In Europe commercial gardens exist all of cordons and espaliers on wire supports about six feet between rows, and in a precious book just sent me from France, a perfect volume dated 1692, of M. De la Quintinge's treatise about his fruit garden creation for Louis XIV at Versailles, the whole scheme of thousands of trees is with espaliers and cordons, not as an economy in space not to create a decorative garden, but to obtain perfect fruit for a rather discriminating king.

But from Versailles to a sixteen foot garden again. The sixteen foot garden I know of is south of the house, and the rear fence as existing is usually quite shaded. Why not two Morello cherry fan-trained trees for this? Then if, say, twenty-five feet of the rear of the lot becomes the orchard (away from the back fence is better as there is always some alien palate to be tempted) and a trellis or support can be constructed across the lot, over sixty feet of wall space is available for trees, and, with cordons at two feet apart thirty can be accommodated. Apples, pears and cherries would be in a fair abundance and when the centre of the plot contains raspberries, gooseberries, currants and even some real strawberries the owner of the little garden can say with Hamlet, "I could be bounded in a nutshell and count myself a king of infinite space."

HOME AND SCHOOL GARDENING IN DETROIT.

MRS. M. H. GROSVENOR, SUPERVISOR, DETROIT.

Children's gardening in Detroit is conducted by the city as one of the activities of its Recreation Commission. A fund for this purpose is appropriated by the Board of Estimates, which provides for all supervision, instruction, labor, equipment and necessary expenses contingent upon the garden department.

The force of the garden department consists of the Superintendent of the Recreation Commission and a supervisor of gardens appointed by Civil Service Commission with yearly salary. Three assistants are allowed, whose time does not exceed six months from the first of April to the first of October. Last spring while the "Plant a Garden" movement was at its height the Recreation Commission made great efforts in its garden department to increase the number of home gardens, and also supplemented recreation work under the supervisor of women's activities with gardening from April to the latter part of August. About forty

play leaders organized garden clubs having a total membership of more than 800 children and devoted two periods a week to war gardens during the early part of the season, and one period a week during the latter part. The policy of the garden department is home gardening, that is, providing directors to go from home to home to encourage and instruct boys and girls to prepare, plant and care for their gardens according to modern scientific methods. One large community garden, however, was maintained and conducted by the garden department which accommodated several hundred children with small plots of ground who had little or no land at home.

The Recreation Commission, through its garden department, conducted demonstration gardens at two of the public schools and co-operated with the Twentieth Century Club in six community gardens by way of providing a director, equipment, or both. The co-operation of the Twentieth Century Club, the Detroit Branch National Plant, Flower and Fruit Guild, and the Recreation Commission in sustaining home and school gardening for children was unwavering, and is of great value to the success of the garden movement in Detroit.

The Twentieth Century Club distributed 259,672 packets of flower and vegetable seeds to the school children of Detroit at a penny a packet. It also made a donation of \$60 worth of flowers and vegetable seeds to the Recreation Commission, furnished automobiles upon several different occasions to make tours of garden inspection and provided the salary of a garden director, to assist the supervisor of gardens for a period of four months. In addition, the chairman and members of the Committee served as an advisory council, visiting home and school gardens during the season and acting as judges of the children's vegetable contests.

The National Plant, Flower and Fruit Guild, Detroit Branch, in co-operation with the Twentieth Century Club and extension department of the Michigan Agricultural College, maintained and conducted a Patriotic Garden Bureau and Garden School for the benefit of garden teachers and public who desired information in modern scientific gardening. Trained and experienced teachers were in charge of all of these meetings.

The Recreation Commission was fortunate in securing the co-operation of the State Club leader, Mr. E. C. Lindemann, early in the season. Under his direction the garden department adopted the Michigan plan for its method of conducting children's gardening. At that time Wayne County had no agent of agriculture; since then it has received an active and efficient county agent, versed in science of agriculture and scientific methods, to whom we apply and from whom we receive assistance, who, also, is the connecting agent between the local organization and the State Agricultural College, which in turn is the co-operating force of the United States Department of Agriculture.

Under the Garden Department the city was divided into three districts, the supervisor and two directors being each responsible for the garden work in a district. The children were reached through the recreation centres, or by the co-operation of the superintendent of the public schools, principals and teachers of the schools.

The children were at once organized into garden or canning clubs. They elected their own officers, president, vice-president and secretary, adopted a simple constitution and by-laws and signed the standard garden pledge for boys' and girls' clubs. An advisory council and local leader were sought among the people of the community, or teachers of the school to which the club belonged. By such assistance the work of the director was made easier and results were more beneficial to the community. Meetings of each club were held regularly once a week under

supervision of the director or local leader. The meetings were conducted according to parliamentary usage. At the close of the business the lesson or story on some garden or nature subject was given, or the garden records were reviewed and discussed. Field demonstrations and practice lessons followed the meeting.

The children were not only taught secrets in the art of growing flowers and vegetables, but when the gardens began producing canning demonstrations were given at various club centres, to which all children were invited to come and bring their own jars and vegetables to be taught to can after the one period cold pack method. The vegetables were almost always taken from their gardens. The kitchens of a number of public schools, settlements, and private homes were opened to the Recreation Commission for canning centres. Canning meetings were held regularly once a week in most of the centres, many times oftener. Many club members were intensely interested in the canning, this was especially true of the boys. One boy became so enthusiastic that he began teaching his mother and all



Children's playground.

her friends the one period cold pack method. He canned, for illustration, one bushel of tomatoes. After that he assisted with all the summer and fall canning. This is one instance from many which are equally interesting.

Exhibits of the first vegetables of the season for all garden clubs of the Recreation Commission were held at the Kirby garden on Saturday mornings. First, second and third ribbon premiums were awarded on basis of cleanliness, neatness in packing, quality and uniformity in size. Other interesting displays of the children's work were fresh and canned products at the Twentieth Century Club during Food week; at the Michigan State Fair, August 29th-Sept. 9th, in which 54 children made 86 entries of flowers and vegetables and canned products, receiving 35 premiums, of which 8 were first prizes.

The garden festivals held in the public schools in September, an annual affair under the auspices of the Twentieth Century Club, to which every pupil brings a bit of his garden to make up the display, were marked with contributions of Garden Club members. Almost every school of the thirty-three exhibiting had a garden club in the community.

The Convention then closed with the singing of the National Anthem, after which the delegates visited the greenhouses of Sir Edmund Osler.

ACTUAL RECEIPTS AND EXPENDITURE OF HORTICULTURAL SOCIETIES IN 1917.

Societies.	Legislative grant.	Municipal grants and donations.	Members' fees.	Gate receipts at exhibitions.	Total actual receipts.	For exhibitions.	For seeds, bulbs and plants and Civic Improvement.	Lectures and periodicals.	Officers' salaries.	Total actual expenditure.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Alvinston	(No returns)									
Amherstburg	76	114	105		349	40	244		25	347
Aylmer	82		78		334	11	297			357
Barrie	160		200		423		219		35	334
Belleville	62	50	80		176		133	17	25	210
Blenheim & Harwich	75		150		429		288	14		349
Bowmanville	49	30	85		164		148		10	164
Brampton	169		234		403		281	84		403
Brantford	309	300	753		1,362		979	22	100	1,152
Brussels	75		111		261		114	9	10	173
Cardinal	35		52		98					64
Carleton Place	146	33	213	25	461	52	250	6	50	413
Chatham	438	1,417	357		2,750		2,479		50	2,740
Clifford	179	10	104	218	726	314			30	686
Clinton	114	25	242		381		413	6		437
Cobourg	40		73		113		38		4	101
Dryden	40		38	11	99	77			37	150
Dundas	113		109		553	29	419	32	25	518
Durham	42	5	52		133		81	2	20	130
Elmira	48	47	66	22	193	54	88	19	10	203
Elora and Salem	54	47	94	18	286	74	140		23	354
Essex	87	55	130		274		45	109	50	221
Fergus	42		80	7	132	81	45		15	197
Ford City	43	132	102		325		295	23		353
Fort William	61	8	161	31	286	89	117	3	25	319
Galt	195	108	218	36	623	285	235	10	100	734
Goderich	92	45	135		278		230		20	276
Grimsby	45		75		120		52	27		89
Guelph	158	175	330		804		381	129		1,036
Haileybury	88	44	90	28	392	187			45	428
Hamilton	334	50	601		1,004	26	437	148	130	998
Hanover	127	53	235		500		447	24	20	557
Hespeler	55	135	109		304		111	34	10	164
High Park	84		156		289	74		24	14	222
Hillsburg	77	10	26	89	276	193	17		15	326
Ingersoll	75	20	169		835		546			780
Kingston										
Kingsville	88	75	95		494		321			463
Kitchener	297	154	221	115	894	309	245	7	100	907
Lindsay	85	5	301		564		254	56		399
Listowel	73	30	60		163		79	13		191
London	340		617		1,010		55	233	110	902
Midland	(No returns)									
Milton	46	1	99	26	183	52	55	9		190
Mitchell	75		131		221		188	12	25	243
Napanee	54	100	53		210		106	20	25	167
Newcastle	36		69		228		81			98
Oakville	35	13	111		162	10	176	4		205
Orangeville	111		96		411	36	301		10	383
Orillia	57		128		185		133	2		179
Oshawa	84		133		228	145	38			222
Ottawa	535	374	1,457		2,429	183	1,547	12	150	2,456
Owen Sound	110	57	139	18	514	152	282	6	20	531
Paris	189	100	300	9	809	113	458	26		714
Perth	160	30	151		504		319	50	30	563
Peterborough	234	110	288		644	12	469	9	50	646
Pictou	37		111		148		70	6	20	164
Port Credit	32	46	68		172	68				149

ACTUAL RECEIPTS AND EXPENDITURE OF HORTICULTURAL SOCIETIES
IN 1917.—Concluded.

Societies.	Legislative grant.	Municipal grants and donations.	Members' fees.	Gate receipts at exhibitions.	Total actual receipts.	For exhibitions.	For seeds, bulbs and plants and Civic Improvement.	Lectures and periodicals.	Officers' salaries.	Total actual expenditure.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Port Dover	62		92		281		181	54	40	299
Port Hope	72		131		203		163	16	10	194
Richmond Hill	60	51	74	20	205	65	92			202
St. Catharines	713	578	824	174	2,596	557	868	9	310	2,678
St. Thomas	800	1,350	765		5,326		4,846	46	225	5,589
Sandwich	292	705	274		1,293	59	792	50		1,235
Seaforth	143		220		591		422	11	35	623
Smith's Falls	101	200	82	9	392	42	279			370
Stirling	46		72		125		103	33		142
Stratford	344	62	669		1,394	79	867	6	75	1,497
Strathroy	149		249		398	25	263	10	25	450
Thornhill	49	16	59		241	66				366
Tillsonburg	116		85	55	715	38	611	12	25	787
Toronto	593	257	808		1,993	363	202	66	170	2,163
Walkerton	42		63	21	135		31	20	22	133
Walkerville	184		183		501		300	2	75	554
Wallaceburg	75	219	134		586		295			356
Waterloo	61	25	85		195		91	40	40	207
Westboro	51		113		164		135	3		179
Weston	120	36	159		356	28	170		10	410
Whitby	64		88		188	1	127	24		175
Winchester	125	60	174		386	17	194	1	20	385
Windsor	585	300	584		1,694		1,297		150	1,706
Woodstock	101	91	300	41	592		440	18	21	578
Totals	11,495	7,958	16,728	973	46,859	4,006	26,515	1,628	2,691	47,035

* For lawns and gardens.

STATEMENT OF MEMBERSHIP AND LEGISLATIVE GRANTS FOR 1916-18.

Societies.	Expenditure in 1917, on which grant for 1918 is based.	Membership.		Legislative grants.		
		1916	1917	1916	1917	1918
	\$ c.			\$	\$	\$
Alvinston (organized in 1917)....	98 90		59		59	45
Amherstburg	347 40	90	105	108	76	124
Aylmer	357 37	133	100	75	82	125
Barrie	333 65	175	200	188	160	151
Belleville	209 51	103	80	93	62	80
Blenheim & Harwich (organized in 1917)	348 93		150		75	139
Bowmanville	164 01	95	85	62	49	70
Brampton	402 66	223	234	156	169	180
Brantford	1,151 83	249	753	216	309	545
Brussels (organized in 1917)	172 63		111		75	80
Cardinal	63 88	52	52	40	35	32
Carleton Place	412 91	188	213	122	146	176
Chatham	2,739 81	208	357	125	438	800
Clifford	685 90	151	153	176	179	229
Clinton	436 75	190	242	135	114	192
Cobourg	101 40	83	73	61	40	49
Dryden	149 68	55	50	77	40	55
Dundas	518 14	106	109	92	113	171
Durham	129 95	56	52	57	42	50
Elmira	202 94	86	66	67	48	74
Elora & Salem	354 04	76	94	75	54	123

STATEMENT OF MEMBERSHIP AND LEGISLATIVE GRANTS FOR 1916-18.—Concluded.

Societies.	Expenditure in 1917, on which grant for 1918 is based	Membership.		Legislative grants.		
		1916	1917	1916	1917	1918
	\$ c.			\$	\$	\$
Essex	220 79	114	130	64	87	99
Fergus	196 55	70	80	57	42	75
Ford City	353 33	95	102	75	43	124
Fort William	318 68	123	184	91	61	142
Galt	734 50	221	218	214	195	263
Goderich	276 14	139	135	104	92	115
Grimsby	89 05	69	75	43	45	47
Guelph	1,035 81	166	330	188	158	378
Haileybury	427 96	91	90	107	88	141
Hamilton	997 70	457	601	329	334	456
Hanover	556 58	141	235	102	127	221
Hespeler	164 40	85	109	76	55	78
High Park	222 40	125	174	78	84	114
Hillsburg	326 28	75	60	75	77	104
Ingersoll (organized in 1917)	780 35	.....	169	.....	75	259
Kingston .....	.....	190	.....	176	.....	.....
Kingsville	462 89	97	95	89	88	151
Kitchener	907 45	266	268	320	297	324
Lindsay	399 07	75	299	65	85	200
Listowel	190 76	80	60	75	73	69
London	901 93	400	617	288	340	436
Midland .....	.....	78	.....	61	47	67
Milton	189 52	105	100	71	46	81
Mitchell	243 37	112	131	79	75	106
Napanee	166 70	60	53	60	54	60
Newcastle	98 11	78	69	58	36	47
Oakville	205 42	105	111	70	35	89
Orangeville	382 63	127	96	138	111	131
Orillia	179 14	122	128	75	57	88
Oshawa	221 78	180	133	106	84	100
Ottawa	2,455 98	614	1,457	470	535	800
Owen Sound	531 25	140	167	121	110	192
Paris	713 73	133	300	145	189	283
Perth	563 29	186	151	171	160	196
Peterborough	645 97	360	300	251	234	265
Pictou	163 85	74	111	52	37	78
Port Credit	149 35	78	68	57	32	60
Port Dover	299 48	87	92	121	62	107
Port Hope	194 31	136	131	88	72	93
Richmond Hill	202 08	85	74	65	60	76
St. Catharines	2,678 28	772	824	677	713	800
St. Thomas	5,589 24	1,370	765	800	800	800
Sandwich	1,234 98	213	282	344	292	415
Seaforth	622 97	87	220	108	143	234
Smith's Falls	369 51	103	82	153	101	123
Stirling	141 73	67	72	57	46	60
Stratford	1,496 87	501	669	349	344	609
Strathroy	449 67	211	249	130	149	198
Thoruhill	365 86	67	59	67	49	115
Tillsonburg	786 93	143	85	136	116	234
Toronto	2,163 33	1,179	1,006	500	593	700
Walkerton	133 31	75	63	54	42	55
Walkerville	553 86	362	183	287	184	204
Wallaceburg (organized in 1917)	351 94	.....	119	.....	75	130
Waterloo	206 92	111	85	98	61	81
Westboro	178 86	92	113	50	51	83
Weston	410 35	158	179	119	120	164
Whitby	174 92	109	88	85	64	74
Winchester	384 81	112	182	106	125	159
Windsor	1,705 79	537	584	614	585	636
Woodstock	578 23	102	300	89	101	248
Totals	46,954 31	14,798	17,162	11,773	11,601	16,327

PRESIDENTS AND SECRETARIES OF HORTICULTURAL SOCIETIES.

Societies.	Presidents.	Secretaries.	Address.
Acton	Wm. White	R. M. McDonald	Acton.
Agincourt	G. B. Padget	T. A. Paterson	Agincourt.
Alvinston	H. Paull	P. P. Winn	Alvinston.
Amherstburg	Dr. O. Teeter	Rev. F. O. Nichol	Amherstburg.
Aylmer	F. L. Wagner	A. A. Learn	Aylmer.
Barrie	J. A. MacLaren	T. T. Young	Barrie.
Belleville	A. E. Thrasher	W. Jeffries Diamond	Belleville.
Blenheim & Harwich	Dr. C. B. Langford	O. F. Anderson	Blenheim.
Bowmanville	Rich. Jarvis	Mrs. E. V. Scobell	Bowmanville.
Brampton	T. Thauburn	F. T. Jennings	Brampton.
Brantford	Geo. H. Ryerson	E. E. C. Kilmer	Brantford.
Brussels	W. H. Kerr	B. S. Scott	Brussels.
Cardinal	J. F. Carr	J. F. Harries	Cardinal.
Carleton Place	A. H. Edwards	J. R. McDiarmid	Carleton Place.
Chatham	Jno. Glassford	Jas. Innes	Chatham.
Chesterville	W. H. Casselman	Miss Helen Moad	Chesterville.
Clifford	Robt. Burnett	Jno. R. Scott	Clifford.
Clinton	M. D. McTaggart	Thos. Cottle	Clinton.
Cobourg	G. J. Anderson	C. R. Gummow	Cobourg.
Dryden	Rev. E. Whitehouse	Alex. Kennedy	Dryden.
Dundas	F. E. Lennard	Jas. A. Kyle	Dundas.
Durham	Jno. Graham	C. Elvidge	Durham.
Dutton & Dunwich	Wm. Patton	W. H. Cape	Dutton.
Elmira	I. Hilborn	C. W. Schierholtz	Elmira.
Elora and Salem	W. McPhee	W. O. Mendell	Elora.
Essex	W. N. Davies	Rev. H. Millar	Essex.
Fergus	A. Perry	J. C. Templin	Fergus.
Ford City	Jos. L. Reaume	J. F. Foster	Ford City.
Fort William	Paul Vanderkaa	Mrs. A. Caskey	Fort William.
Galt	L. Norman	Arthur MacBean	Galt.
Goderich	Jno. Straiton	W. Lane	Goderich.
Grimsby	E. G. McCallum	W. B. Calder	Grimsby.
Guelph	Wm. Laidlaw	J. E. Carter	Guelph.
Haileybury	Theo. Connor	J. N. White	Haileybury.
Hamilton	Jno. A. Webber	Mrs. R. B. M. Potts	16 Bruce St., Hamilton.
Hanover	J. A. Magee	Miss Florence Kirchner	Hanover.
Hespeler	C. A. Michie	E. H. Birkin	Hespeler.
High Park	W. T. Graham	H. P. Howard	208 Pearson Ave., Toronto.
Hillsburg	Rev. J. D. Stephens	Miss Z. Barbour	Hillsburg.
Ingersoll	Rev. Jno. G. Scott	Mrs. F. W. Bowman	Ingersoll.
Kingston	Lt.-Col. R. E. Kent	A. W. McLean	Kingston.
Kingsville	W. E. DeLong	J. E. Brown	Kingsville.
Kitchener	Wm. Downing	H. R. Wood	Kitchener.
Lindsay	G. H. M. Baker	Miss Mary Hogan	Lindsay.
Listowel	J. M. Campbell	Thos. Male	Listowel.
London	S. F. Wood	A. M. Hunt	London.
Midland	(No report.)		
Milton	Mrs. M. E. Gowland	R. L. Hemstreet	Milton.
Mitchell	Rev. A. Dede	A. J. Blowes	Mitchell.
Morrisburg	J. H. Meikle	S. A. Morrison	Morrisburg.
Napanee	E. J. Pollard	W. S. Herrington	Napanee.
Newcastle	Rev. J. Rae	Mrs. J. E. Matchett	Newcastle.
Niagara Falls	H. J. Moore	Miss Eva Dobbie	Niagara Falls.
Oakville	W. S. Savage	L. V. Cote	Oakville.
Orangeville	Dr. G. H. Campbell	H. F. Tuck	Orangeville.
Orillia	Isaac Day	Geo. J. Overend	Orillia.
Oshawa	D. A. Valteau	Mrs. E. J. Jacobi	Oshawa.
Ottawa	Geo. Simpson	H. W. Jackson	25 Sparks St., Ottawa.

PRESIDENTS AND SECRETARIES OF HORTICULTURAL SOCIETIES.—*Continued.*

Societies.	Presidents.	Secretaries.	Address.
Owen Sound	B. Arthur	Miss J. S. Maughan....	Owen Sound.
Paris	W. N. Bell	O. R. Whitby	Paris.
Perth	Hy. Taylor	Robt. J. Smith	Perth.
Peterborough	W. Stocker	C. H. Williamson	Peterborough.
Picton	Jno. L. Graydon	Walter T. Ross	Picton.
Port Credit	Rev. G. P. Duncan	A. W. Briggs	Port Credit.
Port Dover	Jno. Aldredge	W. L. Sovereign	Port Dover.
Port Hope	Thos. Garnett	W. T. Greenaway	Port Hope.
Richmond Hill	Wm. Pratt	Mrs. A. L. Phipps	Richmond Hill.
St. Catharines	W. B. Burgoyne	Mrs. Pirie Blain	St. Catharines.
St. Thomas	Dr. F. E. Bennett	R. W. Johnson	St. Thomas.
Sandwich	Dr. W. J. Beasley	A. R. Marentette	Sandwich.
Seaforth	Wm. Hartry	A. D. Sutherland	Seaforth.
Smith's Falls	W. T. Ferguson	H. S. Hunter	Smith's Falls.
South Norwich Tp..	Mrs. E. M. Pennington.	Miss Ivy E. Pennington	Otterville.
Stirling	J. S. Morton	Geo. E. Kennedy	Stirling.
Stratford	S. R. McConkey	Jno. Elborn	15 Norman St., Stratford.
Strathroy	F. W. Atkinson	Chas. Beckett	Strathroy.
Thornhill	A. W. Galbraith	Miss M. Simpson	Thornhill.
	(Newtonbrook)		
Tillsonburg	V. A. Sinclair	A. E. Raynes	Tillsonburg.
Toronto	P. H. Mitchell	O. St. G. Freer	19 Melinda St., Toronto.
Walkerton	N. C. McKay	Jas. Tolton	Walkerton.
Walkerville	C. D. Brown	D. C. Bawtinheimer..	Walkerville.
Wallaceburg	Rev. A. C. Calder	Rev. M. C. Tait	Wallaceburg
Waterloo	Geo. Coltart	J. Uffelmann	Waterloo.
Welland	Jno. Young	D. T. Black	Welland.
Westboro	J. E. Cole	Miss B. R. Davidson..	Woodroffe.
Weston	T. L. Moffatt	J. M. Pearen	Weston.
Wheatley	J. W. Kennedy	Mrs. R. W. Leader	Wheatley.
Whitby	Rev. Jos. Fletcher	R. M. Tipper	Whitby.
Winchester	J. H. Ross	E. N. Elliott	Winchester.
Windsor	Mrs. C. W. Cadwell	H. J. McKay	Windsor.
Woodstock	J. Y. Smiley	W. L. McKay	Woodstock.

Ontario Department of Agriculture

THIRTEENTH ANNUAL REPORT

OF THE

Horticultural Societies

FOR THE YEAR

1918

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO



TORONTO:

Printed by A. T. WILGRESS, Printer to the King's Most Excellent Majesty

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Printed by
WILLIAM BRIGGS,
Corner Queen and John Streets,
TORONTO.



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To His Honour SIR JOHN STRATHEARN HENDRIE, C.V.O., a Lieutenant-Colonel
in the Militia of Canada, etc., etc., etc.

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I have the honour to present herewith for your consideration the Report of
the Horticultural Societies of Ontario for the year 1918.

Respectfully yours,

GEO. S. HENRY,

Minister of Agriculture.

TORONTO, 1919.

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ANNUAL REPORT
OF
The Horticultural Societies of Ontario
1918

To the Honourable Geo. S. Henry, Minister of Agriculture:

SIR,—The rapid increase in the number of Societies and the enthusiasm of our 18,500 paid members is shown in the appended Report of the Horticultural Societies of Ontario, which I have the honour of herewith transmitting. If the splendid efforts made by horticulturists during the war years are continued in peace time, Ontario will become known the world over as a Province of beautiful homes and productive gardens. The officers and directors of our Association are anxious that the great gardening propaganda, which has done so much along educational as well as healthful lines, should prove one of the many blessings amid the gloom resulting from the world's war. Amateur gardeners have learned a valuable lesson which will not soon be forgotten. The incentive given by our Societies will, I am confident, become more and more of a permanency in the business of city, town and village farming. This gardening work must not be allowed to die.

The Report contains the proceedings at the annual Convention and a detailed review of the financial transactions of the hundred Societies in the Province.

Faithfully yours,

J. LOCKIE WILSON,

Superintendent.

OFFICERS, 1919

President WM. HARTRY, Seaforth.
First Vice-President G. H. M. BAKER, Lindsay.
Second Vice-President MISS MARY YATES, Port Credit.
Secretary and Editor J. LOCKIE WILSON, Toronto.
Treasurer C. A. HESSON, St. Catharines.
Hon. Director T. D. DOCKRAY, Toronto.

Directors: District No. 1, J. H. ROSS, Winchester; District No. 2, H. A. MIDDLETON, Lindsay; District No. 3, GEO. J. OVEREND, Orillia; District No. 4, REV. W. M. MCKAY, Weston; District No. 5, W. B. BURGoyNE, St. Catharines; District No. 6, J. A. MAGEE, Hanover; District No. 7, GEO. H. RYERSON, Brantford; District No. 8, S. F. WOOD, London; District No. 9, JOHN GLASSFORD, Chatham.

Auditors: W. J. EVANS and W. T. GRAHAM.

Representatives to American Civic Association: J. LOCKIE WILSON, DR. F. E. BENNETT, and T. D. DOCKRAY.

Representative to Canadian National Exhibition: P. H. MITCHELL, Toronto.

Representative to School Gardens Association of America: J. A. TAYLOR, St. Thomas, and C. B. HAMILTON, Toronto.

Nomenclature Committee: H. J. MOORE, Niagara Falls; F. E. BUCK, Ottawa; P. H. MITCHELL, Toronto; PROF. W. T. MACOY, Ottawa; WM. HUNT, O.A.C., Guelph; O. J. ROBB, Vineland Station; WM. HERRICK, Galt; L. C. CROMBIE, St. Thomas.

TREASURER'S REPORT

FOR THE YEAR 1917-1918.

Receipts.

Balance on hand as per statement of November 21st, 1917	\$254 85
Affiliation fees account, year 1917-18	76 00
Affiliation fees account, year 1918-19	137 00
Affiliation fees account, arrears	65 00
Allowances for exchange on cheques	0 92
Bank interest to November 30th, 1918	9 90
	\$543 67

Expenditures.

W. L. Lamb, card sign for Convention Hall door	\$0 75
Honorarium to Secretary	50 00
Assistants at Convention	13 00
The Bryant Press, letter heads and envelopes	27 50
American Civic Association, affiliation fee	5 00
H. G. Dillemath, loan of plants for hall	3 00
Treasurer's account for postage and war tax stamps	3 22
Book of receipt forms	0 15
Exchange on affiliation fee cheques	4 52
	\$107 14
Total expenditure	107 14
Balance on hand	436 53
	\$543 67

C. A. HESSON, *Treasurer.*

St. Catharines, February 4th, 1919.

Audited and found to be correct. }
 W. J. EVANS, } *Auditors.*
 W. S. GRAHAM.

ONTARIO HORTICULTURAL ASSOCIATION

The Thirteenth Annual Convention of the Ontario Horticultural Association was held in the Canadian Foresters' Hall, Toronto, on Wednesday, Thursday and Friday, February 5th, 6th and 7th, 1919. The hall was well filled when the meeting was called to order at 2 p.m. on the first day.

PRESIDENT'S ADDRESS.

THOMAS D. DOCKRAY, TORONTO.

On behalf of the Ontario Horticultural Association I have much pleasure in welcoming the delegates and visitors from the Horticultural Societies to this our Thirteenth Annual Convention. We trust that our deliberations together will be of use to your Horticultural Societies, and that you will realize that the officers and directors of this Association have worked faithfully during the past year to forward the interests of your Societies. We have no hesitation in promising you the same co-operation on the part of the officers and directors to be elected at this Convention for the year 1919, if you will make your wants known to them.

Greater production of food through the growing of vegetables was the greatest work undertaken by the Horticultural Societies last year. Details of this and of other important matters will be given in the Report of the Superintendent of Horticultural Societies and by the contributors to our programme and in the discussions that will take place. The need of this greater production was so urgent that the Organization of Resources Committee was created under an Act of the Legislature for the purpose of bringing about greater production in many ways. The Horticultural Societies welcomed the organizers sent out by this Committee, and co-operated with the local Committees in such work as the members of the Horticultural Societies could do, such as vegetable growing in back gardens and on vacant lots and roadsides, children's gardens in communities and at or near schools, the establishment of wayside markets, obtaining labor of the smaller boys and girls in fruit picking and easy work near home, and of older boys and girls and of adults in casual work on the farms, and in the holding of competitions and exhibitions to stimulate interest. These Committees all over the Province have recognized from the beginning the large amount of this detailed and individual work the Horticultural Societies could do and have done, thus leaving the Committees free to deal with the many larger problems in greater production, such as the financing of farmers, or of groups of town people who took up farms, the obtaining of farm seeds in large quantities for farmers, the organization of volunteer help schemes for farmers at seeding, haying and harvest-times, and many other large undertakings in the interest of greater production.

The Committee found that, in communities where there was a Horticultural Society, a large amount of success for greater production was assured. On the other hand, the Committee found it most difficult to obtain results, and sometimes almost abandoned the field, in communities where good organization could not be effected, there being no Horticultural Society. We have even a few

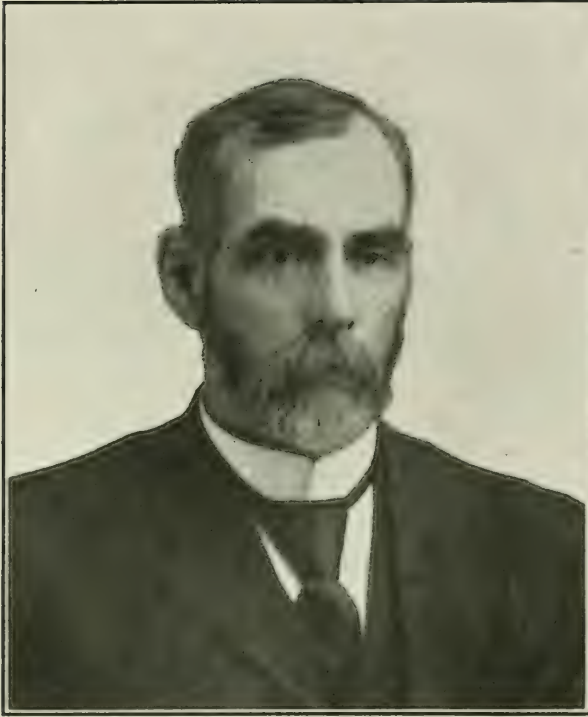
examples where, after the Committee had almost despaired of doing anything and might have let things slide, the citizens got up a Horticultural Society, held meetings addressed by the lecturers from the Department of Agriculture and, notwithstanding a start made a bit late in spring, obtained such results that these new Horticultural Societies, now properly organized under the Act, are full of enthusiasm for this work and promise to prosecute it with full energy during 1919.

But do we, all of us, see the necessity for this work of greater production in horticulture for 1919? With the proper cessation of some branches of voluntary war work in our midst, may not an improper slackening of our duty of greater production manifest itself? Against the slackening we must guard ourselves and our Horticultural Societies. On the one hand, we are assured by all authorities that greater production of food is as necessary this year as last. On the other hand, we know that Canada has suffered less by disorganization, suffered less in resources, suffered less in every way, than any of the other great food producing countries in the world. And, as we have suffered less, so shall we recuperate more quickly than those who have suffered more, and so we should begin almost at once to produce food for the countries that are sorely stricken. If our Horticultural Societies slackened now in this work, it will be our material loss, a loss that we can reckon in dollars and cents. Worse than that, if we slacken now, we shall be deliberately throwing away our chances of a return to that thrift and contentment that beautified the lives of our parents, and upsetting those habits of foresight and legitimate economy that we preached before, and practised, during the war. This will be our spiritual loss. We must take up greater production where the Committee and where the Horticultural Societies left it last year and, with the help of those returned from war, and of those released from war work, and of those whose men will never return, let us all put forth our energies so that material gain and spiritual upbuilding in the fullest measure will radiate from our Horticultural Societies for the benefit of all our people.

It would give me great pleasure to tell you in detail of the earnest assistance of officers and Board of Directors of this Association during my tenure of office as President, of the hearty co-operation of the officials of the Department of Agriculture, and of many pleasant incidents amongst the boys and girls, and men and women, at lectures, exhibitions and competitions. I have chosen instead to address you on the one topic of Greater Production, as I consider it should have our first attention. If any effort I have made during my presidency will help to prevent the thrifty war garden from becoming the weedy victory garden, I am amply rewarded.

The Chairman informed the Convention of the appointment of a Committee to deal with certain contemplated changes in the districts as at present constituted. Committee consists of Dr. Bennett, St. Thomas, Convener; Rev. Dr. A. H. Scott, Perth; G. H. M. Baker, Lindsay, and the President.

Another Committee was formed this morning at the Executive Meeting. In Toronto at our last meeting we had an address on Hybridizing and Experimentation and Dr. Thompson, of the University of Toronto, placed at our disposal the greenhouses at the University for producing new varieties. So a Committee was formed, consisting of Miss Mary Yates, Miss Blacklock, Mr. S. Frank Wood, London, and Mr. J. C. Crombie, of St. Thomas, to bring in next year a report on the production of new varieties.



Wm. Hartry, President, 1919.

REPORT OF THE SUPERINTENDENT.

J. LOCKIE WILSON, TORONTO.

For the first time since the organization of this Association the Annual Convention was not held in November, as usual. Public meetings during that month were under the ban by the health officials owing to the prevalence of influenza and pneumonia. and, in consequence, arrangements were made to hold the Convention in February. Many of the Societies, also, found it impossible to hold their annual meetings during the time prescribed for this purpose by the Horticultural Societies Act, and in all such cases they received permission from the Department to advertise their meetings for a later date.

According to the reports received by me increased output of vegetables and garden products was one of the principal lines of effort of the Societies, but Civic Improvement was by no means neglected, and the beautifying of unsightly spots, the laying out and planting of small parks, and the surroundings of public buildings all received careful attention and did much to increase the interest of the citizens generally in the work of local Societies. These duties were considered by the members as obligations laid upon them to maintain and improve the cities, towns, and villages, so that the boys from the front, on their return, would find that we had kept the faith and the home flowers growing. Disappointment was caused in some instances owing to the non-arrival of bulbs ordered for fall planting, but this difficulty will be overcome in the future now that regular steamship sailings are being restored.

A number of Societies held exhibitions of tulips, other flowers, and vegetables and report that they were most successful. Vegetable seeds as usual were given to school children, sometimes free, in other cases a nominal charge being made, and the vegetables grown from these were exhibited in the fall. Much interest was shown by the youthful gardeners in their work.

The Hamilton Society did splendid work both among the children and adults living in the poorer sections of the city. Prizes were given children for collecting the eggs of the tussock moth, an idea which proved a success when put in operation.

The Morrisburg Society devoted its activities to greater production, utilizing eight acres divided into 52 plots, the total value of vegetables raised thereon being \$1,500.

Chatham did good work in many ways and an American authority states that their war and domestic gardens were the best he had seen on this continent. This Society took entire charge of the city parks and kept them in first class shape.

Lindsay is another Society which has greatly improved the home town. More flower-beds were laid out, and the Town Council, noting the good work, is heartily co-operating with the Society. Vacant garden lot produce totalled in value \$2,000 more than in the previous year.

London has secured a large increase in membership and will do even better in 1919. Three flower shows were held. The members of the Seaforth Society have been experimenting with the growing of peaches, planting them on the north side of buildings so as to delay sap running until danger of early frosts is past. Greater food production was heartily taken up and excellent returns secured from vacant lots and unused streets.

Each member of the Toronto Society received a copy of Wright's Encyclopaedia of Gardening. Two exhibitions were held. In Windsor 35,000 packets of seeds were distributed to the school children. Prizes were offered in the fall for canned and fresh vegetables shown by children, and there was a good entry in both.

The Guelph Society organized several committees to take up the various lines of work and the gardens committee interested themselves particularly among the foreigners. A number of persons were prosecuted for destroying song birds, and also a lineman for butchering shade trees. This Society is determined to stop such work. Mr. McSkimming donated 50,000 fine pansy plants to school children, a gift which was greatly appreciated.

Winchester planted shade trees around the large grounds of the new High School and perennials and shrubs on the front of same. For a small place of only 1,300 population Elora has a record of nearly 100 members.

Carleton Place prepared a border 130 feet long at the Central School and planted pæonies the entire length, also perennials and tulips. Much of the work was done gratuitously.

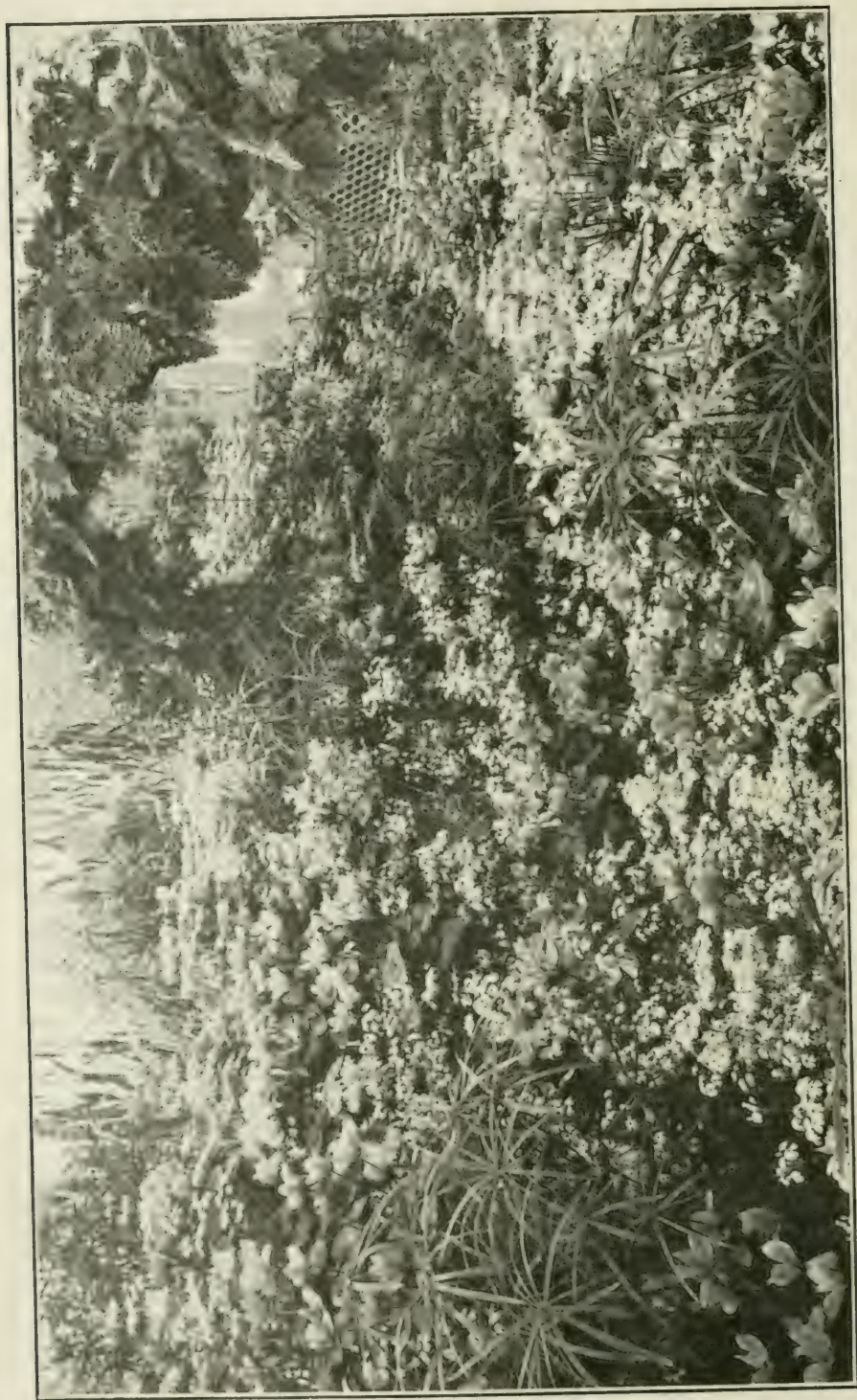
About 10,000 people attended the exhibition and lectures held by the Ottawa Society in 1918.

The membership of the St. Catharines Society has grown appreciably. The city was divided into four districts, in order to carry on the campaign for greater production more effectively, and our Treasurer, Mr. Hesson, organized a Home Garden Brigade in connection with all the schools, which was highly successful.

St. Thomas membership shows a large increase. This Society purchased for distribution at cost, and also for park and other purposes 100,000 tulips, 35,000 gladioli, 12,000 roses and thousands of other plants and shrubs. It is proposed to establish a memorial grove of English oaks in Pinafore Park, each tree to bear the name of a St. Thomas soldier who died for his country. Every available piece of vacant land in and around the city was put into crop. Agriculture is being taught in the Collegiate Institute and all public schools, and each school has a garden. Street sweepings and leaves are collected from which over 200 loads of good manure and leaf mold are available each year.

Interest in Civic Improvement continues all over the Province, there being added to the list of Horticultural membership in the past year eight enthusiastic Societies with energetic officials, viz., Acton, Agincourt, Dutton and Dunwich, Morrisburg, Niagara Falls, South Norwich Tp., Welland and Wheatley. One of these, the South Norwich, became organized under the amendment of the Horticultural Societies' Act permitting the formation of Township Societies with a minimum of twenty-five members. This is the first Society to take advantage of this new departure. Last month nine more new Societies became organized, thus increasing the total in the Province to 99. Aurora, Bothwell, Fenelon Falls, New Hamburg, New Toronto, Iroquois, Russell, Wiarton and Wolverson are the latest additions, and of these, one at least, Aurora, did splendid work during 1918 among school children and members prior to being officially organized.

Under the Horticultural Societies' Act, cities of over 100,000 population are allowed two Societies. The City of Toronto has a population of nearly 500,000 and one Society is located in the centre of the city and the other in the west. Riverdale Society in the east is unable under the Act to become organized although excellent work is being done by them, notwithstanding the fact that they receive no grant. I would suggest that this Convention recommend to the Government that the Act be amended as follows: "In cities of 100,000 population and under,



Where flowers bloom in profusion—Ardwold, the residence of Sir John Eaton.

one Society may be organized, and one additional Society for each additional 100,000 population up to 400,000." This would allow the City of Toronto to have two in addition to those already organized.

I know that every member of the Ontario Horticultural Societies will join with me in the expression of sincere sympathy and regret at the passing of that grand old veteran in Horticulture, the late R. B. Whyte. Since the inception of our Association Mr. Whyte has attended all our Conventions, and took an active part in them, and no man was listened to with more respect and esteem than our late lamented brother. His crossing the "Great Divide" has indeed been an irreparable loss to us all, and our hearts go out to his bereaved family when thinking of the vacant chair at their fireside, which will never be filled by the one we so dearly loved. The little children, too, in the Ottawa Valley will miss him. He was their friend and they were his. The work done by him in encouraging the children in gardening and the financial assistance given by him in this connection has much to do with the progress made by the boys and girls of that countryside.

Home and school gardens have been of inestimable value in training youthful horticulturists, but, owing to the fact that educational institutions are closed for two months in the most important part of the growing season, I am of opinion that the home garden has proved of greater value than those conducted by schools. but, if arrangements can be made for a caretaker to look after an experimental plot on school grounds, the best results can thereby be obtained. One can readily understand the evil effect on a child gardener when he sees his model school plot, from which he intended to copy, dried up and weedy through lack of proper care. I would strongly recommend when a school plot has been established that the teachers and Board of Trustees should not fail to have it kept in the best possible condition. Better to have no school garden at all than a neglected one.

With our united efforts in the past we have accomplished much, but much remains to be done. I know you will go out from this Convention filled with enthusiasm and inspiration for

"Out of our effort achievement.
Out of our thought the act,
Out of our failure success,
Out of our errors fact."

W. J. EVANS: I am vitally interested in that part of the Superintendent's report, *re* the formation of more than one Society in a large city, and would suggest that a committee be appointed to draw up a resolution, and in the event of its adoption by this Convention, it be sent to the Minister, stating our views. The Toronto Horticultural Society has been penalized because the High Park Society was formed in the west. The Toronto Horticultural Society enjoyed a membership of 1,000 odd and we would have had \$800 if it had not been for the "baby" in the west end. Now, if the Act is not changed we will still continue to enjoy the \$700 while other Horticultural Societies in St. Thomas, St. Catharines, Ottawa, and others (who are doing good work) are enjoying a greater grant.

DR. BENNETT: Might I point out another injustice—why should Horticultural Societies with a membership of 1,000, 2,000 or 3,000 be penalized and only receive a grant of \$800, while smaller Societies receive approximately the same amount? We quite agree that Toronto should receive greater representation and should not be penalized to the extent it has been.

J. LOCKIE WILSON: When that Act was changed the Hon. Mr. Duff was Minister. I went over it very carefully with him. His views were that Toronto should have two Societies, giving \$500 to each. Later on, the amount was increased to \$700. The point in regard to this question is this: you are all penalized—every extra Society you form in this Province reduces your grant. If you had the opportunity of having four good Societies in Toronto, each getting \$700, you would be getting \$2,800, and you would not be so badly off. It is not much incentive to this Association to have four Societies if the one that is already added to is just struggling along. The object in forming these Societies is to get them to work and get to the top of the ladder. It would be better to have two large Societies instead of four very small ones.

Mr. Sinclair, Mr. Evans and the Superintendent were appointed as a Committee to look into this question and draw up a resolution to be submitted to the Convention.

THE CHAIRMAN: Regarding the mutilation of shade trees on the highways, the Guelph Horticultural Society took that up and under the Ontario Tree Planting Act prosecuted a lineman of one of the wiring companies who cut some limbs off a tree on the highway to let the wires of his company go through the tree. After they had proved they were right they let him go because it was not the man but the corporation who was doing it. The prosecution was based on the Ontario Tree Planting Act, Chapter 213, where there is a clause stating "if any person injures a tree on a highway without the consent of the municipality he can be prosecuted and fined and in default of paying the fine, imprisoned." These wiring companies, however, usually get the consent of the municipality first.

MR. SINCLAIR: The G. N. W. have a stipulation that they may trim as long as they do it reasonably. Also the Bell Telephone Company have a similar agreement. The Hydro-Electric have had the Act changed so that they can trim 10 feet. I have in mind a whole row of trees along a farm front which they are threatening to butcher. I know it is a difficult matter to get any intermediary legislation.

DR. BENNETT: The feeling is so intense throughout the municipalities that if we organized as we should, we could beat the Hydro-Electric. They ruin trees in every municipality. If we get our Legislative bodies busy we are strong enough to carry this through.

W. J. EVANS: My idea is to enlarge that committee which you appointed in connection with the matter of grants and ask the Convention to bring to that Committee any resolutions members have, with a view of bringing them before the Convention and, if approved, before the Minister. Some of the organizations may have suggestions in mind for additional legislation to take care of certain matters *re* Children's Gardens and Playgrounds, etc., and this could all be considered by this Committee and recommendations brought in the last day of the Convention.

The matter was left to the Committee named.

THE LATE R. B. WHYTE.

PROF. W. T. MACOUN, OTTAWA.

One of the most active and enthusiastic members of the Ontario Horticultural Association is absent from this annual meeting. Our friend and fellow horticulturist, Mr. R. B. Whyte, working too industriously in the garden he loved

so well, over exerted himself on April 15th last, and passed away at his home in Ottawa after an illness of barely ten minutes.

We miss his familiar face, his earnestness, and his keenness in discussion, and we shall miss in the future the ready and practical information on flowers and fruits which he was ever ready to impart to the members of this Association from his great store of knowledge.

Rarely do we find in this age an amateur horticulturist with as broad a knowledge of horticulture as had Mr. Whyte. He was interested in everything that grew, and he was a born experimenter. His garden acre at Ottawa contained one of the finest collections of herbaceous plants in America, and it was particularly strong in pæonies, irises, lilacs, day lilies and phlox. He had a choice lot of gladioli, and grew many seedlings. A scarlet variety originated by him, which he called Bresaya, was one of his best. His collections of narcissi and darwin tulips, the bulbs in which he was most interested, contained the choicest varieties. It was his practice to test a large number of each kind of flower, and then keep the best.

One of his specialties was English gooseberries, of which he made a great success. He originated several good varieties, one or more of which may be introduced. His greatest gift to horticulture was the Herbert raspberry, which is of large size and fine quality, and owing to its hardiness is enjoyed in many a home from the Atlantic to the Pacific and as far north as the Peace River and, perhaps, to the Yukon.

Mr. Whyte's garden was not planned to obtain special effects, although with the abundance of fine flowers there the effect could not be anything but pleasing.

He loved the individual plant, but judged it by comparison with other varieties rather than as a plant for decorative purposes in combination with other plants. Thus, his garden was a great testing ground, and the information obtained there and the material that was in it was ever available to those interested.

Mr. Whyte was a very active member of the Ottawa Horticultural Society, and was one of its organizers in 1893. He was President for the years 1900-1902, and one of the Directors almost continuously until his death. He was mainly instrumental in founding the Ottawa Flower Guild in 1908, a children's organization which received its chief financial support from him. In 1912 he organized a Potato Growing Contest for farmers' boys between the ages of twelve and eighteen in Carleton County, which was extended to Russell County in 1913. In 1915 he began to encourage the development of home vegetable gardens on the farms in Carleton County by offering prizes to the girls for the best kept gardens. By his will, \$500 is to be devoted each year to such work in these counties.

When the Ontario Horticultural Association was formed in 1906, Mr. Whyte at once became one of its most active members. He was, in fact, one of a Committee which waited on the Government two years before to urge the importance of it. He was President in 1910 and 1911, and also a Director for some years. Mr. Whyte was 67 years of age when he died. While we shall not see him any more, he will not be forgotten by this generation of horticulturists, and the results of his work will live on after we also have passed away.

ALLOTMENTS AND HOME GARDENS.

G. H. M. BAKER, LINDSAY.

I wish to speak about vacant lots in my home town, allotments thereof for gardening purposes, and also make some suggestions.

To commence with, I would like to say that you are not listening to an expert farmer or gardener, or florist, but a lumberman who loves horticultural work because of its aims and benefits to the individual and the country in which we live.

Early last spring we advertised for and secured as many vacant lots of land as we could, then we appointed a Superintendent who divided the plots up into reasonably sized lots, which were numbered as Civic Lot No. 1, 2, 3, etc. These lots were then given to any party who wanted them, and would pay the small fee for plowing.

After securing the lots and knowing their location, we secured the necessary teams with plows and harrows, and our Superintendent looked after the team work, pointing out the lots that had to be plowed, so that there would be no delay on the part of the teams.

In this way we were able to get the lots plowed and harrowed very cheaply. We charged \$1.25 to \$1.75 for plowing the lots, according to their size. We also plowed lots for soldiers' wives, free of cost to them, having found that the small charge of \$1.25 to \$1.75 per lot enabled us to do so.

We secured a list of instructions from Prof. Neilson showing the dates, suitable to this district, that different kinds of vegetables should be planted, or sown, how far apart the rows or hills should be, and the depth the seed should be sown. It also showed the earliest and latest dates the different kinds of vegetables could safely be planted. Some of our gardeners secured practically two crops off the lots by using this information. This was a great help to the amateur gardeners, and these instructions should be secured by all Societies. Some old farmers asked for copies of them. This information was secured from Mr. Neilson when he was giving our Horticultural Society a lantern lecture on backyard gardening. We got some other very valuable information from him which we were careful to impart to our different gardeners throughout the season.

The year before nearly all the beans that our Vacant Lot gardeners tried to grow were badly injured by rust. This, Mr. Neilson told us, was on account of our hoeing them early in the morning when there was a heavy dew on them. This was good news to those who were early risers only because they were trying to garden, but the information proved valuable, and very little trouble from rust (although we have had a very wet season) was reported this year.

The valuation of our crop this year, from a close estimate, shows about \$4,200 as against \$2,000 for the previous year.

What I would like to have given the Association this year regarding vacant lot gardening was a comparative statement showing what Vacant Lot Gardeners produced during the year 1918 as compared with 1917.

Nothing succeeds like success, and the certain knowledge that we are making progress from year to year, which a comparative statement would give us. We have a statement in the Annual Report of Horticultural Societies of receipts and expenditures, throughout the Province, also showing the number of members in each Society. We see from that Report how each Society is increasing its expenditure over the year before, and if its membership is increasing or decreasing. In looking over this statement we see the wonderful progress made by St.

Thomas, Chatham, Brantford, Guelph, and other places, and we ask ourselves, "How do they do it?" and in some way we find out, and make an effort to get close to their figures. We notice in the Report that in 1917 only one Society reached the \$800 maximum grant from the Government, while in 1918, four Societies received it, and several other Societies came close to earning the maximum grant. If we had a column showing value of "Production" of vacant lots, and in our Annual Statement had we to show what was produced from vacant lots, we would see what other Societies were doing and if they were doing very much better than our own. We would also find out how and in what way they were able to accomplish so much, and in a short time we would learn how, and no doubt many Societies would put forth greater efforts in vacant lot garden-



Gordon Galbraith, Newtonbrook, first prize, Thornhill vegetable garden competition.

ing, both by the grown-ups and by the children. I believe it should be the aim of the Horticultural Association of the Province to try and secure figures from the different Societies, each year, so that the desired comparative statement might be forthcoming in the near future.

To encourage Vacant Lot gardening among the children, we offered several cash prizes for each school, for certain named kinds of vegetables which seemed better than not to name the kinds, and we had a splendid display, with very keen competition, and the children are looking forward with great interest, and already planning, their next year's work.

A little girl said, "The war is over and Charlie (her brother) will be home before spring, and I am sure he will help me to have a good garden next year." When I heard this remark, I felt more than repaid for any work that I had done to secure the competition for the children of the different schools in our town.

The greatest and most terrible war that the world has ever seen, is over, and

many of the gallant fathers and brothers of the children will be home and not know what to do with themselves, in fact, be lost and dazed on account of the strenuous and terrible strain they have been through at the battle front. What would soothe, and help them to forget the distracting memories of what they had been through more than that their young sons or daughters, or little brothers or sisters should come to them and say, "Won't you come out and help me with my garden? I want to win the prizes offered by the Horticultural Society."

Gardening among the children of the different schools is an important part of our work that should not be neglected, and our efforts in this direction should be greatly increased.

I intend offering prizes to the children of returned soldiers who may have the best gardens next year, and do all I can to get them interested in garden work.

We found this year that by using the vacant lots as gardens we obliterated many unsightly spots, and turned them into valuable and pretty places and it prevented the growing of weeds that scattered their seeds into well kept gardens where work was hindered and increased by the production of these flying seeds. Lots that were dumping grounds for tin cans and all sorts of rubbish were cleaned up and made to produce. In a short time we could make these producing lots pretty as well as valuable with flower beds among the garden plots; we can do very much more in this line and greatly improve the vacant lots.

The work that can be done to clean up and beautify vacant lots through the efforts of the Horticultural Societies should impress upon us the importance of having a column in our annual statement which would make this work necessary to Horticultural Societies in securing their Government grant, and the value of this work could be considered by the powers that be from time to time.

Vacant lots not tilled and any lots which the owners refuse to till or hand over to the Horticultural Society, should be looked after by the Municipal Councils, the weeds cut, and the cost of doing the cleaning charged against the lot. Pastures that are unsightly should not be allowed within certain limits of any city, town or village.

If Horticultural Societies would endeavor to work with the Municipal Councils and get them interested in their work, especially in respect to vacant lots, parks and boulevards, they would be able to accomplish a great amount of work that could not be done without securing the hearty co-operation of the Municipal Councils.

WHAT OTTAWA DID IN WAR GARDENS.

S. SIMPSON, OTTAWA.

EXTENT OF THE WORK. Intensive war garden effort was taken up by the Ottawa Horticultural Society in 1917. In that year figures compiled by the President of the Society and the Secretary of the Vacant Lot Association show that over 200 acres of land were put to war garden uses, and a total crop yield, above previous years, of over 75,000 bushels of garden produce was the result. In 1918 the crop total reached over 100,000 bushels of garden produce, the backyard gardens producing about one-half of this and the vacant lot areas the remainder.

ORIGIN OF THE WORK. The Horticultural Society was extremely active for several years in war garden effort and distributed free seeds in special cases, considerable prize money for war gardens, and undertook extensive propaganda

which consisted in lecture courses and special illustrated lectures in various parts of the city, as well as practical demonstrations during the summer.

To enlarge the sphere of its vacant lot work the Horticultural Society, in 1917, decided to organize a separate vacant lot association, which, to quote from the first Report of the Association, had its birth as follows: "From the initiative of the Ottawa Horticultural Society, whose interest in the general improvement and welfare of Ottawa is unflinching, a meeting of interested citizens was held on March 16th, 1917, when the formation of the Association was determined."

SOURCE OF LAND AND SIZE OF LOTS. The Society advertised its needs for idle land through the local press and met with generous offers. It accepted only large areas and such small city lots as could be easily plowed. The land was scattered all over the city and consisted of about sixty or seventy parcels of land, averaging from one-half to seventeen acres in extent. The standard size of the lot was twenty-five by one hundred feet. Although several made application for more than one lot, only in a few cases could the additional assignment be made, owing to the fact that more applications were received for lots than the Association was able to fill.

MANURE. The manure was, in some cases purchased, but in most cases granted free by the city. Only such areas as were badly in need of manure received it the first year. The manure was found to be a costly business, owing to the expense of haulage more than to the actual cost of the manure.

PREPARATION OF THE LAND. The land was plowed and harrowed. In all cases it was disk-harrowed and in some cases the spike-tooth harrow was used in addition. The plowing was done in the spring the first year, from necessity, and by teams hired by the day. In 1918, the Association fall-plowed about one-half of its land. The cost of preparing the land averaged about \$10 per acre. The lots were free the first year, but in 1918 a charge of \$1 was made for each lot to help defray expenses of manure, etc. In some cases also an additional charge was made for the manure.

MANAGEMENT. The management of the Association was under the direct charge of a Board of Management, which assigned the work to committees, as follows: Finance Committee, Printing and Publicity Committee, Allotment Committee, Farms and Gardens Committee. The Finance Committee collected the funds, the Printing and Publicity Committee had charge of the work of publicity, the Allotment Committee took charge of the laying out of the areas and assigning the lots, and the Farms and Gardens Committee took charge of the practical work of handling the lots. The Association engaged the services of one Superintendent, who was the only paid official.

RESULTS. The result in the improvement of the appearance of the idle land of the city was remarkable. The lot holders, in all cases, appeared to be extremely satisfied with their efforts, while the financial results, as stated on the covers of the Annual Report of the Association, are as follows:

1917		1918	
Expenditure	\$2,400 00	Expenditure	\$3,500 00
Return	26,000 00	Return	55,000 00

Number of plot holders in 1917, 1,200; number of plot holders in 1918, 2,130.

ALLOTMENTS AND HOME GARDENS.

MRS. R. B. POTTS, HAMILTON.

The conclusion arrived at, when considering this theme which has been assigned to me, is that the "Home Garden" part refers more to this work when organized into what is known as "Community Gardening," than separate, individual "home gardens" with their admittedly important interests, and, as I understand the matter, to best cover the ground, a sketch of some community club, if drawn, would be the most effective method to adopt, and since there are several with which I am familiar, one of these will be taken as the basis of this part of my assignment, because there are many sections of our country in which problems similar to those the leaders of this particular community club had to meet, are still to be found, and the results attained by the leaders referred to will help, it is hoped, to inspire any one seeking to undertake a like activity.

Several years ago a young lady—who because she shuns publicity will remain unnamed, though deserving recognition because of the work she has accomplished—removed from one section of a city to a part just outside that city's limits, and here found conditions which were to her deplorable. At first she attempted only to interest some of the residents in "a clean-up" but after a season's work so little *appeared* accomplished, and the problems confronting loomed so overwhelmingly large, a nearby Horticultural Society was appealed to, in the hope that while it was not so well known as an active force, which might have been expected of it after many years of existence it might nevertheless be a force of greater power than it was thought to be. The appeal did not fall on deaf ears, and a tour of inspection was made, which resulted in three impressions being left on the visitor's mind. 1st, how near to a Shackville state a section fringing a piece of the best residential parts can be; 2nd, how long does it take for Shackville to change to Slumville; and 3rd, how brave was the young lady who had attempted to tackle unassisted the numerous problems which were confronting one in an attempt to remedy evils then but too apparent. That it had to be a work of slow and tedious growth was but too evident to any experienced eye. That it would have to be treated indeed much as a hypochondriac would require to be seemed but too probable, and the choice of "ways and means" to effect a cure was limited in the extreme. With this diagnosis of the case the first thing necessary was to arrive at a plan—a definite one—as to the cure, and then set about administering the treatment. Here let me say that probably the homeopathic system had better be selected, at least at first, with the majority of cases: though there are times when it is well to be an "eclectic"—the "case" must be the guide in this matter. In the one referred to the treatment has been largely "homeopathic" throughout, and has been most successful since a healthy condition is to be found now, which was hardly hoped for in the time which has passed since the diagnosis was made, considering the chronic state of the case. From the small beginnings at the "clean-up" there came an attempt to encourage the growth of flowers. Here, let me add, is a most excellent opening for the surplus from generously-minded horticulturists' gardens, for all can be used to great advantage. The best method is to start with the children in the section chosen, giving them presents of baskets of these surplus plants, often otherwise thrown on the rubbish pile and instructing the recipient in making the beds, and planting the plants, and generally gathering the children to look on one as their confidential advisor. If possible, gain an entry to help supervise the making of the beds

and borders, for information is very badly needed as a rule. After that, continued interest must be shown in the progress of the gift-plants, and soon after this visits to "see" will be in order, for by this time the adults of the family will have been won. Then be sure to follow up with more gift plants to cause more space to be cleared for growing things. Following this the next stage is a very modest competition, *with rules*, certainly, but these so elastic at first that one scarcely feels the drawing of the cords, as they are more "cords of love" than anything else, because, in such undertakings as this I am picturing for you, the "humanity" spirit must predominate. From visiting and awarding more material the street competition follows in natural sequence, and from this to the organization of the community club for a limited section comes as naturally as to breathe. If it is possible to organize or encourage the organization of a sister community club not very distant much is gained, because the one can be pitted against the other, and become "an inspiration each to the other." Personally, after years of thus working with community centres, I favor small sections thus set apart, as the work at best—until all is running like well ordered machinery—is very hard on the leaders, who probably have to learn as they go, and so like the garden space should not be of greater extent than can be reasonably covered. The financial side is always a matter of deep concern to workers, since it is not possible in 95 per cent. of the cases to derive from the people themselves a revenue sufficient to pay expenses, to say nothing of allowing for awards, etc., but if there is a wide awake Horticultural Society nearby, there should be no difficulty in securing co-operation, and having the financial matter carried by their aid until the community becomes self-reliant, and this is something which should be striven for from the beginning—never out of mind—because it is essential to the ultimate success of the work in hand. Much depends on those who compose the sections undertaken, as to how quickly other phases of the work can be introduced, and different competitions wedged in, in order to awaken new interests, as well as spell progress for the old. In the community I have in mind, while the beginnings were admittedly not promising, many new lines have been undertaken in an incredibly short time, including street competition, weed campaign, birdhouse competition, and a tussock moth campaign, which ended in a bonfire of the cocoons to the delight of the young workers, and, by the way, these children were rewarded by having seeds given them for their prizes, thus helping their war-garden work, and besides this helping to prepare them for the annual exhibition which is now an established fact in that section. Other ends were accomplished, for the winners had an increased interest in those seeds and their results when gardening time came.

One thing which this little band of leaders does might be copied by others (for this leader has succeeded in gathering a nice little support of interested helpers) for the workers to meet and consider the small details connected with all parts of their activities. Someone asks a question about something not understood, and this is noted, and, if an answer cannot be given at the time, it is sought for and later handed on to the questioner. This gives a clue to the working staff which they heed, and if it is possible to hold a meeting and have a speaker these questions will be forthcoming for the benefit of others. This custom prevails in connection with the annual show, and those representatives from the horticultural or other organizations assisting, are asked to explain certain garden difficulties which have been noted, or state why the judges made the awards they did in certain cases, when to the ordinary untrained observer other exhibits appeared better. Instruction is thus "sugar-coated" for the patients, and if a



Instructing young gardeners in sowing the seed.

bit of "surgical work" must be done the opportunity is thus afforded, and a healthier state results in consequence.

How does this affect Horticultural Societies apart from the privilege of being co-operators? From personal experience I can say that each year finds recruits for the membership of the Society of persons, who, had it not been for this community home garden organization, would probably never have dreamed of entering the ranks of the larger organization. It is quite true that this is brought about sometimes by making some of the prize money won by progressive community workers the equivalent of paid memberships in the Horticultural Society, but once there, if the Horticultural Society is really interested in the community welfare, it should not be hard to retain the community workers in the Horticultural membership. Sometimes, if the section is a very poor one, after a member's year has expired the membership drops, because even the \$1 membership fee in the Horticultural Society is a burden in some cases, and this must not be ignored or scoffed at, for it is too real, unfortunately, unpleasant as this sound in this bounteous land of ours. We must also admit that every town and village have sections which are not a credit to it, and here is one way of accomplishing results if *willing* is substituted for *wishing*.

That it means work, and much work, and often more work is true, but of such value are the results that the very difficulties only bring more joy of achievement. So much for the "home gardens" in this community centre since it can be stated that from "no gardens" a short time ago over 100 producing ones have evolved, and these are visited for inspection and judged by members of the Horticultural Society who are assigned to this duty, and the reports that they give, together with the display at the annual exhibition, would lead the most sceptical to take heart and confess that the seemingly impossible was only so after all, and that what was accomplished—often with difficulty, it is granted—in this section can be done in many others, and let us hope will be undertaken there for there are so many places needing just this "helping hand" treatment to make our towns and cities—yes, and villages—the credit they should be to us with all our privileges in this fair Canada of ours.

The old saying is that "a penny saved is a penny earned," and not a few to-day can testify that the land used by them for vegetable growing while allowing for a better meal than otherwise would have been possible meant an addition to the income when the crops were estimated in dollars and cents. Think in view of last season's market prices what it would mean in some sections if 200 children brought in from their plots even 10 or 15 cents worth of vegetables per day for the home table.

It must not be forgotten, however, that not "all backyards" or land connected with residences could wisely be used as vegetable gardens, and more, not all residences have ground to utilize. Take this illustration—one not hard to duplicate unfortunately. A man had a lot, not in the centre of city either, with 60 ft. frontage and depth of 200 ft. He first ran a lane of 30 feet to the back of the lot, and after adding some ground from his own yard, on the 30 feet left proceeded to build, and the result was 7 houses on 91 feet. On the remaining 30 by 109 feet an apartment place was built, so the only unbuilt part was that lane. There was not much chance for home garden for the occupants of these buildings, as can be readily seen, and it is in such instances as this that the value of allotments will be evidenced.

What is an allotment? Sections of land, in small pieces, suitable for culture, and of special benefit in either rural or urban districts where the gardens attached

to the dwellings are small or unsuitable for cropping, is about the nearest definition possible.

To understand the movement properly, it is well to consider the history of the allotments in the Motherland, and this can be gleaned from garden literature, and other works. Having gleaned bits of the history for some years, it may be well to record the findings in order to aid those who have not the time for this research work.

In an article written in 1909 a writer states "There is no more remarkable phenomenon of our time than the outburst of popular demand for a bit of land. It is impossible to follow the course of the public discussion in the press, in Parliament, and at public gatherings without seeing that this is the one popular cry which is generally insistent, intense, and favored by all parties. "Allotments for the people" have rival societies to promote them. Garden Cities, Garden Suburbs, Garden Homes are being talked about on all hands, and efforts to promote them are seen everywhere; the popularity of the cry distinguishes the movement. The cry will not pass away. It will become more urgent and general. It is a mistake to preach up country life as offering equal opportunities for earning wealth and incomes. The nearer men come together for business purposes the easier it is to make money. The economic advantages of crowded centres of population are very great indeed."

Men seek material advantages too readily, and without balancing the most important of other considerations, and so we crowd together to secure gains which proximity of intercourse brings, and never think of the curtailment of opportunities for health, and exercise: the lost chances of joyous open air recreation, but find out by slow and painful experience how health, strength, vigor, and the joy of life are being sacrificed on the shrine of wealth-winning. We awake at length to the fact that it is possible to sacrifice life for a living. The awakening has come, and means must be found to satisfy the longing of townspeople for relief from the evils of overcrowding we have brought upon ourselves in our too inconsiderate pursuit of wealth. Goldsmith wrote:

"A time there was, ere England's grief began,
When every rood of ground maintained a man."

About the 15th century these words were not so descriptive of conditions as previously, and from this time on there might have been said to be a continuous separating of the mass of the people from the land. Each cottager, before the rise of modern industrial life, and the numerous Inclosure Acts of 17th, 18th and 19th centuries, cultivated his own small parcel of land, and with this he also had the right to turn out his cattle, swine or geese to graze on common land. However, one Inclosure Act followed another until as much as seven million acres of common land were inclosed and this between 1760 and 1867.

As grazing rights were thus taken from them, the cottagers had to be compensated in some way, and hence many of the Acts provided that a gardening space should be reserved. Whatever the Act may have reserved for the benefit of the cottagers it is a fact that between 1845 and 1867 at least half a million acres were inclosed and only 2.119 acres set aside for cottagers' gardens.

Carefully consider this fact, and then recall that this was followed by a drift to the cities and towns, where greater wage earning opportunities, higher wages, and less monotonous existence were offered, and it is easy to see why it was stated that "this lure of the towns with their greater opportunities, began to show a marked effect on the rural sections, and there was a rapid decline in

the agricultural population," so much so that in the 19th century the policy was to endeavor to find ways to check the ever increasing tide of humanity flowing steadily toward urban centres, and Acts providing for small holdings became about as numerous as the preceding Inclosure Acts, for it was thus hoped to induce the agricultural laborer to remain on the land. Landlords at the same time discovered that small holdings were very profitable things, and that "the fork and spade husbandry" as it was termed, was more effective than the plow.

The first Acts were passed in 1819 and 1831, then the series which followed these were consolidated in the Small Holdings and Allotments Act, 1908.

In 1894 there was what was known as "The Parish Councils Act" and this gave a great stimulus to conditions, for during the first four years of its working, it was found that about 15,000 acres has been allotted to 32,000 tenants.

In the matter of allotments one thing must be kept constantly in mind, viz., that the size should not exceed the ability of the gardener to cultivate in his spare time; and the size favored seems to be one-quarter acre. The plots are held on a yearly tenancy, and hence it is not deemed wise for holders to expend much for sheds, etc., for any building on the lot if it interfered with the sun's light is deemed a great disadvantage and objection is made to it. An eighth of an acre was deemed a good average size for an allotment, and there are circumstances which led to a demand for smaller plots, though larger ones are not as a rule deemed advisable, upon the ground that a man following his regular occupation all day could hardly be in a physical condition "to keep more than 20 rods clean and well cropped." The term "small holding" is applied when the allotment is an agricultural one of from 1 to 50 acres.

So much for the story of Allotments. Here in Canada land was so plentiful, it was not considered of great value until the acute food problem presented itself, and people hastened to assist in the solution. Then land problems cropped up in profusion, and those undertaking to operate the "vacant lot gardening" had experiences of this.

Passing over those which must be familiar to most horticultural officers, there is one feature clear to a careful student of "best ways and means" and that is that where it is necessary to awaken and nurture interest, the sections which had organized community centres, and established that desirable *esprit de corps* attained a higher degree of success than the others who ignored this essential feature. By creating a Community Club it is possible to open "a centre" where those needing instruction, and co-operative aid in various lines can come, for people will come together in their own neighborhoods who will not attempt to go beyond a certain radius no matter how advantageous it might be for them to do so, and the friendly rivalry which can be cultivated in this way is of inestimable value. A community exchange is also possible so that the deficiency in one garden can be supplied from the surplus of another, the leader being the agent of exchange, and thus waste, now too frequent, is avoided.

To Horticultural Societies there are endless open doors of usefulness, and hundreds of hands stretched out asking help before the "slough of despond" is reached, if only the scales could be taken off from our eyes that we might see these.

Co-operation is the real secret of success in both of these lines of work, whether in the individual's home-grounds, or in lots prepared and set apart, and organization of some sort there must be, if the best is to be attained. George Eliot asked "What are we here for if it is not to make life less difficult to each other?" And in the community or allotment work it is well to recall another of her sayings, viz., "You must learn to deal with the odd and even in life as well

as in figures," for much of the "odd" has to be dealt with, and it is worth giving careful consideration to.

To anyone who would attempt this important line of activity it is most heartily commended, and with this remember George Eliot's words "The blessed work of helping the world forward happily does not wait to be done by perfect men," and Burton's statement "Experience shows that success is less due to ability than to zeal. The winner is he who gives himself to his work, body and soul."

MR. T. L. MOFFAT, president of the Weston Vacant Lot Gardening Club, gave some valuable ideas based on the Club's first year's experience in 1918. Manure was brought in by the carload and sold to the gardeners and plowing and harrowing done at cost and seed potatoes were also sold to them at what they actually cost to be laid down in Weston.

PROF. MACOUN: I have been closely associated with a scheme in Ottawa for the past four seasons where a piece of church property had been cultivated for the purpose of war gardening. In asking for a decision from the various workers of the past years of these plots for the coming season, 130 had replied they wished to go on, and only three stated they were unwilling to prosecute the work.

THE JUVENILE COMMUNITY GARDEN.

REV. W. M. MCKAY, WESTON.

Of the army of a hundred and fifty Weston children who had juvenile gardens for the year 1918, twenty-four belonged to the community garden. Of this number, eleven were girls and thirteen were boys, aged from ten to fifteen years—all volunteers from the public and separate schools of the town.

A half acre centrally located was selected by the committee in charge and carefully planned so as to allow a plot twenty feet by thirty feet for each member besides necessary roadways and dividing paths. These plots were staked and allotted by the committee, following which a court of revision was held so that all might be satisfied with the allotments. The committee also had the garden manured, plowed and harrowed and also insisted in ridding the ground of twitch grass. The Town Council placed hydrants through the grounds free of charge and loaned a large locker for garden tools and equipment. The Weston Horticultural Society, of which this is a department, financed the undertaking, paying for seeds and other necessities.

The work fell naturally under two heads, class work and field work. The former was carried on either in a class room or on the grounds when instruction would be given. Drawing plans of the whole garden and of each one's own plot, studying how to produce an effective and attractive uniformity and still allow some latitude for individual work, when and how to prepare the soil, when and how to plant, how and where to place each row. How and when to cultivate and water and weed and thin and prune and spray and later to harvest and market—these were some of the curricula for class work which in turn preceded the field work. Each member was required to keep a diary for the season's work, a premium being set on this phase of the work. Classes in the school room lasted twenty minutes, classes on the grounds ten minutes preceding field work. Field classes were held, as a rule, Tuesday evening and Saturday morning.

Usually the members of the garden came early and had their Union Jacks floating from the initial green and white stake at the north-east corner of their plots. The general garden flags with the individual garden flags were always at full mast during field work. Promptly at the hour appointed for the class the whistle would blow and the class come to attention, after which work would begin and last for one hour. A bulletin board assisted in keeping dilatory ones up with their work. To keep in the running, unfinished work had to be caught up with between classes and promptness figured largely in class standing.

A record was kept of the class and field work from week to week throughout the season and a well understood proficiency standard was kept before the community from the beginning of the season's activities to the end, in accordance



Healthful employment.

with which the prizes were eventually awarded. This standard was arranged as follows:

- Attendance
- Promptness
- General discipline
- Honor
- Industry
- Various tests
- Diary
- Monthly judging of gardens by different pairs of judges
- Final judging by members of the Ontario Horticultural Association
- Amount of produce marketed
- Bonuses

The results of the season's activities were on the whole satisfactory for a beginning. For the greater part of the time the children kept the garden looking attractive and succeeded in converting many critically inclined people to their side. The children themselves were proud of their achievements, and requested that they be allowed to resume activities next year, which to the committee was the best proof of its success. The Ontario Horticultural Association's President who was a frequent visitor, also pronounced it a success. A careful estimate

placed the net returns at \$156, or \$6.50 per garden plot. This means when figured out \$435. Fifteen collections out of twenty-four plots were placed on exhibition and twenty-five dollars in prize money given to the successful exhibitors. Some fourteen out of twenty-four succeeded in attaining the general efficiency standard. The Town Council opened up a town market and the children's produce was the first to open the market for business.

Among the many problems which the year has brought to notice in juvenile community garden work, a few may be mentioned. Necessary grading—every town should have at least a beginners' community garden, one for intermediates and a senior garden. In the second place, I should mention proper supervision; during field work there should be a supervisor over every four beginners, one over six intermediates, and one over every eight seniors, all acting under the general supervisor. In the third place I should mention the problem of marketing. Early in the season this should be well planned and settled upon. In the fourth place, there is the problem of banking. Every child should be taught to use the bank. Lastly, play hours should not be forgotten. Arrangements should be made whereby the children could be taken on excursions to other gardens, greenhouses, model farms, etc.

The Committee strongly recommends that the Ontario Horticultural Association establish a general efficiency standard for the Province and that Provincial diplomas be forthcoming for all pupils achieving such standard.

I believe that the signs of the times point to a greater activity in productive industries and especially those relating to the soil. We see to-day the very foundations of our communities shaken, and in many parts of the world even these foundations are in ruins. We all feel the need of some remedy which will secure for us and for all a condition of peace and good will among men. I submit that all problems such as those of capital and labor, production, distribution and consumption, forms of government, the discovery, interpretation and enforcement of law, taxation, health and sanitation, etc.—problems which are the disturbing and destroying forces of to-day, because wrongly conceived, which if properly understood and sanely administered would result in a condition of peace and goodwill, not merely spiritually but also industrially, domestically and socially. I further submit that the juvenile community offers the best—nay, the only opportunity in which the seeds of his higher and happier order of living and thinking can be made to germinate, to grow and to blossom and to bear fruit, for how can a man be born again socially, industrially or domestically when he is old. I look confidently to the time when the equipment of our public schools shall not merely be a well heated, well lighted and well ventiated building with comfortable seats, and blackboard and pictures, etc., all of which are essential, but will also include according to conditions, a juvenile community garden, a juvenile community factory, a juvenile community laboratory, etc., not merely as ends in themselves, but as means to educate the children of to-day sanely and intelligently in the fundamental problems which make for higher citizenship so that they may become the men and women of a to-morrow whose prevailing spirit is that of peace and goodwill. Until this goal is reached we shall not exhaust the possibilities of educational statesmanship.

SCHOOL GARDENS.

J. A. TAYLOR, ST. THOMAS.

I anticipated that the preceding lectures would be along the line you have listened to this afternoon, and at the expense of avoiding repetition, I thought that perhaps I would not be committing an unpardonable sin if I were to urge the advisability upon the representatives from the different communities to see to it that school gardens and community gardens are established in connection with their schools, and if you will bear with me I will be very brief in my reasons for advocating same.

The question of food determines the destiny of any people. The struggle for existence is largely a question of food. The very question of civilization itself hinges on the necessities of life. The war was brought to a successful termination through the absence of food and it is very difficult for anyone to stand before you and tell you what might have been the fate of civilization and humanity had this not been the case. We know that Germany was forced to capitulate through the efforts of the British fleet in stopping the trade routes to Germany.

The soil of St. Thomas is fairly fertile. It lends itself admirably to the multiplication of school gardens. The people of St. Thomas are a fairly well-to-do class that live not in apartments or flats but nearly every person owns his own home. There is an abundance of land for vegetable growing. We recognized this year the great economic value that attached to the cultivation of vacant lots and backyard gardens. The industrial opportunities in the City of St. Thomas for school children are very few. We have observed that in this city, idleness is the cause of the greatest number of Juvenile Court cases, and probably in speaking for St. Thomas I am speaking for all cities equal in population. It is also noticeable that most cases of juvenile crime attach to children of twelve years. We know that this is the age of the child when its activities lend itself most favorably to the cultivation of gardens. Children leave school at fourteen years of age, either through financial distress or economic conditions. We are satisfied that many of them could continue at school were gardens more generally cultivated. Many a child who is walking the streets of St. Thomas to-day, and other cities as well, would be able to continue his school life if sufficient provision could be grown on his lot.

Living in St. Thomas is perhaps no more expensive than at other centres. Vegetables are relatively dear, and that is one reason why there has been such an untiring effort to induce the people to cultivate their own gardens.

For the boys of St. Thomas, like the boys of other community centres, there is no such thing as home work. That is one of the perils of the rising generation. What is going to be the future of the products of the schools, when the boys are allowed, as they are, to grow up without the slightest opportunity of any kind to work. In the days when you and I went to school we had our chores to do. The average city boy now has no chores. We had to saw the wood, split and pile it, carry it in and carry out the ashes; to-day we have the furnace in the basement and the ashes are left for the ash man in the spring. In our day we had to go to the post office, at least, for the mail; now we have the street delivery. We had to go to the grocery stores to get the groceries; we now have the telephone and the grocery delivery. In our youth time we at least had to go out to the well to carry in a pail of water; to-day we go to the pantry and turn on the tap. So the problem of bringing up children in a city is a serious one.

In St. Thomas we have a very live Horticultural Society. It is a Society that I believe is known from the waters of the Atlantic to the waves of the Pacific, and from the icebergs of the north to the warm waters of the Gulf of Mexico. The centre, the radius and circumference of that Horticultural Society hinges and rotates around the President, Dr. Bennett. He is an asset of St. Thomas and one the city could not replace. Having thrown his entire energy, his great skill, his enthusiasm into the building up of the Horticultural Society of which we are so proud, he directed his energies to the cultivation of school gardens and from them to the cultivation of the vacant lot and backyard garden.

The idea that we in St. Thomas have is one you entertain. It is the same idea voiced by the Superintendent to-day that environment plays a tremendous factor in human history. I had the pleasure last year of inviting your attention to the reading of Gerard's book, "My Four Years in Germany." They are trying to-day around the peace table to locate the personal responsibility for the past titanic struggle. Gerard tells us that the great cause of the war is that the children of Prussia are not provided with enough sunshine. As you know Prussia borders on the Baltic Sea. The prevailing wind there is cold, there is so much aqueous vapor that there is very little sunlight, and, as a result, the children of Prussia are reared in so much darkness that the very milk of human kindness is curdled, the refining influence of flowers is absent, and that accounts for the unspeakable tragedies and brutal atrocities of the Germans during the struggle which has just been ended. Whether this is so I know not. Be it as it may, we all know that environment does play a great part in human history.

In St. Thomas we have made great efforts to beautify and make useful the waste places in the city.

School gardens give training to children in soil cultivation, teach the economic value of such cultivation, and make gardening profitable and pleasurable.

St. Thomas, I might remind you with pardonable pride, is, I believe, the only city in the Province of Ontario, or for that matter, in the Dominion of Canada, that has schools in everyone of which scientific advanced instruction is given in gardening by teachers specially prepared at Guelph Agricultural College. We have no fewer than seven schools in the City of St. Thomas, including the Collegiate Institute. In each one of these we have a teacher who looks after the teaching of Gardening and Agriculture, and has been trained at the Guelph Agricultural College. No fewer than 1,200 pupils in the City of St. Thomas during this past term got advanced scientific instruction in agriculture. It was so eminently successful that I have no apologies to offer in appearing before you to-day and asking those of you who have not yet established in your communities school gardens, to be untiring in your endeavors and to be ungrudging in your activities, to see that these gardens are established in connection with your public schools. I can thoroughly and heartily recommend them to you.

Last year the weather was very unfavorable as you know. We had alternately dry and wet weather. We restricted ourselves to the growing of potatoes, cabbages, lettuce and tomatoes. The crop was but partially successful, but as the previous speaker has said we embarked on the undertaking so late in the season that we had no time to have the land properly plowed. The St. Thomas Horticultural Society would recommend as strongly as I can put it into words, that all those present who have not yet established gardens, do so for the following reasons:

- (1) Because they promote community improvement.

- (2) They embellish repugnant looking backyards and cultivate unsightly waste land.

(3) They awaken and stimulate the aesthetic side of human character and improve the general appearance of the city.

We would also direct your attention to the fact that these gardens are only a partial compensation for the dreadful carnage and appalling devastation of the war. We know that the soldiers who are returning have a right to see something different from what they had in the war zone. There they saw nothing but devastation and ruin. They heard nothing but the shrieks of the wounded, and the groans of the dying. They saw death in its most repulsive and most repugnant form and it is our duty to see that these soldiers when they return will behold something different to what they did on the battlefields of Europe. We cannot expect that any person who has been in the battlefield for three or four years will come back and take his place in civil life and civilized society instantaneously. Civilian absorption takes time. I know of nothing that will



Children's Exhibit, Waterloo Horticultural Society.

bring these men back to organized civilized society so quickly as the sight of beautiful flowers and the multiplication of gardens. I know nothing that will repatriate men so quickly as these two things.

School gardens also contribute to national prosperity. We know that the cost of vegetables is exceedingly high. It is nothing but right that the children should be taught to play their part in national prosperity.

Moreover, their examples are contagious. They spread to the cultivation of backyard gardens. The public school is the first line of defence, and the battles of to-morrow are being won in the schools of to-day. The children who are instructed are the trustees of posterity, and will be the defenders of future civilization. If we closed up the public schools of the country for but eight years, there would be safety for neither life nor property. Bolshevism would reign in this country as anarchy reigns in Russia to-day, and the only safety we have for the maintenance of law and the sovereignty of our Constitution is the development of the intellect of our rising generation.

We know that boys are bundles of activity, and this activity should be

intelligently directed. The garden furnishes the opportunity. There is no country to-day—unless it be, perhaps, the United States—where the people are so extravagant as we are. The Government is now circularizing the communities to teach the problem of thrift to our children in the public schools, because they will be the future financiers of this country.

These gardens dignify labor; they teach industry; they teach that the child should contribute some service to his community and fatherland and above all they teach him to be patriotic to the highest interests of the land of his birth.

We have already learned that *there* is an increase in juvenile crime in other parts. I do not think we have this in St. Thomas. If the school gardens were made an integral part of every school we would be reasonably justified in looking in a very few years for a reduction of juvenile crime. Prisons emptied, police staffs reduced, pauperism abolished and fewer community parasites.

Re its educational value: It furnishes opportunity for observation and experimentation. It is a sad commentary on our schools that very little opportunity has been given to the children to develop the spirit of experimentation or cultivate the faculty of observation. We have very few Marconis and still fewer Edisons and Bells; may we not look for the reason in the very fact that our children have graduated from the public schools without having had any opportunity at all for experimenting and observation. In school gardens, opportunity is furnished to every child to develop a spirit of investigation.

Then, too, they furnish opportunity, as nothing else can, for the accuracy of observation. They constitute the outdoor laboratory for the study of physics, chemistry, botany, zoology and nature study. Excellent opportunities for training in practical arithmetic are furnished.

Occupations cease to be educative when they turn out to be profitable. A man working in a shop, as soon as he has learned the mastery of his occupation, makes no further progress. But for the child in the school garden, there is continual progress. Climatic conditions change, there may be too much or too little rain. We have more heat to contend with, or we have less heat. New problems arise continually. They give opportunities, as nothing can, for the formation of good habits. God pity the child who leaves the school to-day without having good habits impressed upon his mind. Someone has said, "Sow a thought and you reap an act; sow an act, and you reap a habit; sow a habit and you reap a character; sow a character and you reap a destiny; sow a destiny and you reap an eternity." And it also gives opportunity, as nothing else can, to teach a boy that as he sows, so shall he reap.

It establishes the intimate connection between cause and effect, and shows in practical circumstances the meaning of discipline of consequences. He is taught that he cannot gather figs off thorns nor grapes off thistles, and what a man sows that shall he also reap. The spirit of co-operation and team play so necessary in civic life are developed.

A chain is no stronger than its weakest link. By sacrifice and earnestness alone can efficiency be realized. The allied front, from the North Sea to Switzerland, was no stronger than its weakest trench.

In addition to establishing the necessity of working with nature and knowing her laws and phenomena it develops the spirit of ownership, the keenness of competition, and awakens and arouses ambition. To-day Russia and other countries are ripe with anarchy. That country alone is safe where the people own their property. A country is in constant peril where the spirit of ownerships is absent. We want to develop as much as we can in the minds of the rising generation the

spirit of ownership. We do not fear to-day Bolshevism or anarchy in this country, because eighty per cent. of the people own their own homes. Were we like Russia or Ireland, we would rise in the morning trembling, not knowing what the day was to bring forth. But on account of personal ownership in this country there is no fear of Bolshevism.

Let me also call to your attention the fact that it teaches one of the fundamental principles of civilization—that each child should contribute towards his own support. When this is thoroughly impressed on his mind there will be fewer human parasites in civilized society.

Reverence and modesty are taught, as no one, particularly a child in the formative years of his existence, can go into the garden and look at a beautiful flower, no matter of what kind, without having his whole character changed and destiny shaped. He sees what shadows we are and what shadows we pursue. He learns to look up through nature to nature's God. He sees in the seed he sows the promise of the resurrection and the emblem of immortality.

This Horticultural Association cannot be better employed than in calling the attention of the communities at home to the necessity and duty of looking after those children whose fathers now repose in France, and it seems to me that we have an obligation—not transferable of seeing that they are taught the fundamentals of education and the rudiments of making their own living. If, on returning, our Canadian soldiers find that you and I are just as selfish and indifferent and pleasure seeking as we were in the days when they left in 1914 to fight our battles, they can only have one conclusion, and that is that the boys who drenched the trenches with their blood did so in vain; or if on returning, they see that you and I take no more interest in their children than we did in the days before they left, if they find us sighing for the flesh pots of Egypt, their one conclusion can only be, that their sacrifices have been made for no purpose. No sacrifice on our part however great can discharge the debt we owe to the little child whose hero father sleeps beneath one of the crosses in France of the poppies in Flanders:

For how can man die better
Than facing fearful odds,
For the ashes of his fathers
And the temples of his Gods.

HOW TO FINANCE A HORTICULTURAL SOCIETY.

DR. F. E. BENNETT, ST. THOMAS.

The subject selected for me to deal with is as noted above, but may I be permitted to change the wording to "Things We do Which Bring Finances to Our Society." The secret of the whole situation could be summed up in two words, *make good*. Our experience in St. Thomas is that when tangible results are shown it is comparatively easy to get money for necessary expenditures. This may seem like the American maxim, "look prosperous if you want to be prosperous," and in a way it does apply to horticultural work. Well do I remember the first boulevard beds our Society planted on a prominent street paralleling an international railroad. This was some ten years ago. They were crude diamond shaped beds surrounded by wire netting for protection and labelled, "*Planted by the St. Thomas Horticultural Society. Kindly protect.*" But crude as they were,

they immediately won recognition in a most practical way—a large increase in membership. From that time on the boulevard beds have increased, until to-day nearly every street with a suitable boulevard for beds has its share of beauty spots. But let me assure you that protection for flower beds is not necessary; once the people of a community realize that the beds are planted there for their benefit they assume the position of protectors. As membership increased and finances increased proportionately, bigger problems were tackled and the more work done, the easier it was to get money.

In commencing this line of improvement I would start somewhere where it is easy to get quick results with minimum expenditure, a place where people will readily see the improvement on old conditions. Very few Societies are favored as the St. Thomas Society which receives several thousand plants yearly from the city's own greenhouses, but where plants have to be purchased it might be better to plant perennials or annuals which can be grown from seed at very small cost.

Gradually our work widened in its scope, and we began to make educational collections of rare shrubs, planting trees of perennials and roses and bulbs in our public works, at times making the planting a public affair or an historical event, such as planting a royal oak by His Excellency the Duke of Comnaught some five years ago, and during the past season by His Excellency the Duke of Devonshire.

The educational collections consisted in part of 150 varieties of Irish roses, 125 varieties of tulips, 60 varieties of lilacs, 150 varieties of peonies, and many other collections of note, part of these collections being donated by private citizens. Thousands of people visited these collections during the blooming season, and from the names which are attached select their favorites. This encourages them to grow only the best varieties in their own garden. Competition naturally springs up among local growers and through the generosity of a local merchant his beautiful store windows are at all times available to our members for display purposes. Every variety of flower shown is properly named and classified. This gradually leads to a great demand for the rarer, newer and better things whether in roses or gladioli or bulbs until to-day our purchasing power is as good and in some cases better than that of the large dealers. You will wonder why I say better. Take the case of a gladiolus grower for instance, one who hybridizes. He puts on the market a magnificent new variety say General Pershing or Giant White. He sends to the wholesale and retail dealers his offerings for the season. The buyer selects mixed Mrs. France's King, Glory of Holland, or a few other well known varieties and the same old list is offered year after year. He says he has not time to educate the customer up to a higher standard and here is where our society excels. Citing this year's offerings for example, over 70 varieties of the finest and newest creations of America's foremost hybridists of gladioli were purchased. The same thing can be said of roses, of peonies, of tulips and other flowers and with these plants and bulbs bought in immense quantities at advantageous prices and given as options and sold to our members one does not wonder that with these splendid advantages a large membership is attained. In the sales a small profit is always made which increases our working capital. A well spent portion of this capital is devoted to daily advertising, daily change of advertisement, is made, one day appealing for members, another day describing an option, another advertising a lecture and so on. Experience has shown that publicity is the secret of success.

Believing as we do in the gospel of flowers we have tried to spread the message by out-of-town exhibits such as at Toronto Exhibition and London Fair in co-operating with nearby societies at their flower show, by assisting in organizing

other societies either personally, or by correspondence, until to-day practically every town or village in South-western Ontario boasts of a prosperous Society and naturally St. Thomas is referred to as the centre of things floral, and instead of being known as the railway city which might lead one to think of noise and smoke it is now better known as *the flower city* wherein it is good to live. We have the unanimous support of our City Council, Board of Trade, Trades and Labor Council, in fact, of every organization within our limits who believe in a prettier, healthier and better St. Thomas—support, too, of the practical kind, financial. Last year one improvement alone cost us \$2,000, that is the reclaiming of the waste area known as the M. C. R. Park. To-day it is a real park as you will see from these views. The M. C. R. donates \$500 per year towards its maintenance. To meet this and other heavy expenditures a subscription list was circulated and over \$1,000 was raised principally from private subscriptions of from five to twenty-five dollars. The City Council have gradually raised their annual donation from \$150 to \$1,000. Another important feature of our work that has made a host of friends is the distribution of bouquets to the hospitals, to churches and to prominent visitors, the bloom in winter being secured from the municipal greenhouse and in summer from planting of our own stock.

Street improvements in several instances have been aided considerably by our Society and property values in the immediate proximity have been very much enhanced. Conservation of street sweepings, leaves and stable manure is practiced by our Society and large piles are stored up each season to rot and be used either by our Society on public beds or sold to our members to aid in greater production with all the advantages offered to our members, and these advantages are ever increasing. Our membership has grown during the past ten years from 125 to as high as 1,425, but with the big drive planned for Jan. 27-31, a minimum membership of 3,000 is expected, and there is no reason why every Horticultural Society in Ontario could not do likewise. A few figures showing the chief items of receipts during 1918 might not be amiss: Legislative grants, \$800; City of St. Thomas grants in cash and flowers, \$1,000; M. C. R. grant, \$500; Board of Trade grant, \$100; sundry donations, \$730; membership fees, nearly \$1,000; sales of roses, bulbs, etc., \$3,364; and sundry other items, totalling \$8,200.

The principal disbursements were wages paid on upkeep of boulevard beds and park work \$3,065, for nursery stock, bulbs, duty and shipping thereon \$4,300, and with shows, periodicals, etc., totalling \$8,200.

I have tried to tell some of the things we have done that pleased the public who have shown their pleasure by giving unstintingly and as I said in the beginning the secret of it all is *making good*.

HORTICULTURAL SOCIETIES IN RURAL DISTRICTS.

V. A. SINCLAIR, M.L.A., TILLSONBURG.

It may appear rather a paradox that a lawyer should appear to represent the rural communities in a horticultural sense. But I have practised among farmers for over twenty years, and sometimes, perhaps, the man from outside has a truer vision of the requirements of a particular class than the class themselves. For instance, you send for a doctor to find out what is the matter with you instead of taking your own feelings as a guide.

It is a great pleasure for us horticulturists that we can once more think of flowers without having any reflections cast upon us that we are not paying any attention to the more important things, such as have engrossed us in the last four years. We have been just a little afraid to express ourselves along floricultural lines. We have devoted our energies more along greater production lines, and they have done their part in a good way. But I must confess myself that I am glad to be able to go back again to the growing of flowers without feeling that I have to apologize for doing it.

We should not have been ashamed of our love of flowers. There is no better welcome home that we can give to the boys than to show them that we have a country that is beautiful. The boys that are coming back are coming back different



Woodland Scene, Ennisclare.

from the boys who went away. These boys probably have seen some of the finest gardens in England and France—and there are no finer in the world—and they will come back with a broader vision of what gardens ought to be. We as horticulturists must live up to these visions of our soldier boys.

They are not the only ones in the community who will feel dissatisfied with present conditions. The farming community is also dissatisfied. You see the outgrowth of that in Farmers' Associations and various movements which are attracting a great deal of attention in various parts of the country at the present time. Various means are taken to try and meet them. The farmer thinks his life is one of the hardest, most disagreeable and monotonous, his work the least paid of any class in the community—in fact, what you might call an unlovely life. Now, that may be true in some ways, but there is help for this along the lines of making his life more lovely in external affairs at any rate. The Horticultural Society should play a very important part.

You know the Rural Community Movement which has been going on throughout the country in the last year or two, which is intended to give a community life to the farmer and to make his life a better and a broader life. Now we can implement that movement very extensively and very fully if we put our minds to it as Horticultural Societies. I cannot see why there should be any difference between our country and England, for instance. You know in going through England that the most beautiful part of it is the country, that the most attractive parts are the lanes and roads of old England with their hedges and parks, their beautiful lawns and flower gardens, and country life is in the old land considered the most desirable of all lives. The country gentleman is the man looked up to and whose life is most desired. The city man tries to have his home in the country, to be surrounded by country things.

We have just as good a climate, in fact better, because in England they have to grow their grapes and fruit under glass, while we can grow ours outside in profusion. There was a time in this country's history in the pioneer days when a farmer had to cut his way through the woods, and when he got home at night he did not care whether he had a front garden or anything else but bed, and about the only gardens in those days were a few geraniums in cracked pots that a few beauty-loving farmers' wives grew. But those days are past. It is not a lack of money or advantages that is keeping back the farmer from having beautiful surroundings. You know there are none at the present time in the community who are spending more money upon their buildings, their barns, improved machinery, installing all kinds of modern implements, everything of the kind which goes to make up the money-making section of the farm. In the County of Oxford, which we think is the banner district of the Province, the farmers are right up-to-date. They have model electric light plants costing \$400 and \$500 where they can't get the Hydro. No class is buying more freely of furniture, pianos and musical instruments. You see just as fine homes erected throughout the country as in the cities. But when you come to the external decorations there is something lacking, and it seems it is our place to try and help fill that. You will see a magnificent house with grass growing in tufts around it—a big place that might be a lawn—but absolutely no decoration of any kind. The house is not a home, simply a cold, uninviting house. Possibly the next farm may have a small cottage, with some peonies and tulips in the spring, some climbing roses, hydrangeas, and so on, which make a home of the cottage.

When you consider the advantages which the people in the country have as compared with those in the town you wonder why that state of affairs should be, because in the town or city, in order to indulge our gardening hobby, we probably pay from \$500 to \$50,000 an acre, as the case may be, according to location. On the farm the best farming land probably does not sell for more than \$100 or \$125 an acre. There is an abundance of land. Every house in the country has sufficient land around it to make a garden. A farmer could have an acre or half an acre of garden and still have sufficient land to work for farm crops.

Then think of the difference in the soil. We in the towns and cities probably start to make our garden on the sand that we threw out of our basements when we built our houses, whereas on the farm the humus is gathered from farming operations for fifty or sixty years. In the city and town we are starved for fertilizer, whereas on the farm it is right at hand, the best in the world.

When you think of our stunted yards and think of the way the farmer's house is set back from the road perhaps 100 yards, you can just figure in your mind's eye how that place can be fixed up. How you could have a drive up

through stately spruce or flowering shrubs, or a walk of perennials, and you can see what a difference it would make to have that farm decorated as a man in the town would have it done.

The most profitable investment a farmer could make would be to decorate his farm and put it in proper condition to attract the eye. Possibly his soil may not be as productive as that of his neighbor, but I guarantee the man who has the attractive yard would have the first chance to sell.

Those are things which ought in some way to be drawn to the attention of the agricultural community. As a class they are rather suspicious of your trying to do them good. I have been at some meetings with the rural community movement, and I have found a great scarcity of farmers there. I found the town or village people where the meeting was being held came out and were interested, but you seldom found that the farmer was there. He will not be patronized. He feels he is as good as anyone in the community. And rightly so. So it is a thing that has to be handled with kid gloves. We have to meet the farmer and let him understand that our interest in helping him is genuine and not at all actuated from any desire to patronize.

To me it seems that one of the reasons for the scarcity of farm labor is the fact that the homes have not been as attractive in many cases as they should be. I don't believe you could drive a boy away from the attractive home if there is room for him to stay. I believe one of the best ways to keep the boys on the farm is to have attractive surroundings to the home. There are very few advantages that we have in the town that they can't have in the country. Electric light, nearly everything we can think of except the closer relationship we have in the cities and towns are there.

About suggestions as to how we can help. Horticultural Societies have not done their duty in respect to the farming community. There are 225,000 farmers in Ontario. It is not necessary to ask how many farmer members our Societies have. I don't know, but I would hazard the opinion that there are not 500 members in the 19,000 or 20,000 that we have. In St. Thomas, 80 per cent. of the farmers around St. Thomas, when asked, signified their willingness to join. So that if there is a willingness there, the trouble must be on our side in not getting in touch with them and trying to interest them in the work of the Societies in town. I know they are interested, as I have talked with them, and I know the farmers come in and make creditable exhibits at our exhibition. I have in mind a farmer on the Ingersoll Road who comes in and competes for our prizes, and he gets 99 out of 100, and you would pick out his farm as the best and finest on that road. The flowers in front and the buildings present an up-to-date appearance and attract anybody's eye. I have had farmers come in, many of them, to get tulip and other bulbs from the Horticultural Societies. I have never charged them more than members. I feel any kind of work we can do to cultivate a love of flowers is well repaid. I have had them come and ask what kinds of shrubs to put in. It is easy for us to put them right in this and show them where they can improve their farms at little expense and make a wonderful difference in their appearance.

We have not done that to the fullest extent to which we can go, and useful work can be done by every Horticultural Society with the farmers adjoining the towns, and if you once get the good work started it will continue to develop.

We should encourage, as a general body here and in local bodies, the organization of Farmers' Horticultural Societies. I had that object in view when I brought the Bill into the House and they now have the right to form a Horti-

cultural Society in a township with 25 members, and I had the pleasure of being present at the preliminary meeting of the only society formed under the amendment—South Norwich—just outside of our corporation.

The war has been somewhat of a damper on this work, but there is now no reason why every township should not have a Horticultural Society.

We have the Minister with us to-night and I would like to take the opportunity to say a few things that I think the Department might do. Ontario has an Agricultural College in which there are a great many professors, but so far as I know, there is not much attention paid to instructing the young farmers how to beautify their buildings. Every student should have a knowledge of this.

In Oxford and every other county there is a District Representative, and they come in touch with the farmers all over the country. We have a man in our county who is fond of flowers and who is prepared to help out in every particular. I think other representatives will probably be the same.

A letter from the Department asking those District Representatives to devote some attention to this subject would also do good.

There is at Guelph a landscape gardener, Mr. Tomlinson, who is also here to-night. I understand his work consists largely in making plans for public schools. His services could be more widely used among the farmers by preparing plans of ordinary farm premises which would be helpful in the general layout of a garden and lawn, and his services could in that way be much more made use of throughout the farming community than they are. Model farms in the way of external decorations could be established in every community so that farmers could get an idea how to put their farm yards in a proper landscape condition, adding very much to country beauty. It would be of inestimable service to the community to have some man's farm laid out in this way.

I think also that the Department of Education could use their public schools for the purpose of helping in this work. In the Rural Community Movement it is expected that the school house will form the centre or the nucleus for the rural community life. I know they have their garden parties there throughout the summer, their school and political meetings, and it is in most communities the centre of that community. It seems to me that nothing is easier than to have the schools encouraged to put in a lawn, beautify their grounds, plant flowers and shrubs, and especially bulbs that will bloom in the spring and fall when the school is going on. If you get the schools, you get the young men and the girls who are willing to learn, and you start your movement in the right place.

The District Representative could also do much through the School Fairs, where the children are taught to grow grain and vegetables. Very little attention is given there to the growing of flowers, or the giving of prizes for sketches of home decoration. An immense amount can be done with the girls and boys in the rural communities in that way.

There is one other way, that is advertising. The Department can afford to spend some money for advertising through the Agricultural papers. We should have articles running through the various agricultural papers which circulate among 20,000 and 30,000 subscribers each. An immense amount of good could be done by spending a little money in advertising showing the farmers how they can get bulbs and shrubs.

THE CHAIRMAN: I was struck by one thing the last speaker said, and that is of the number of farmers who came to him at Tillsonburg. We have one member in the Toronto Horticultural Society who has always lived on the farm.

He comes in thirty miles and takes away any prizes he feels like. He brings in not flowers but wagon loads of stuff, not for competition, but just to make the show look fine.

ADDRESS.

HON. GEO. S. HENRY, MINISTER OF AGRICULTURE.

I came into the building this evening with more or less timidity. I did not know very much of the organization, and I imagined that I was coming into a gathering where the faces would be practically all new to me, and consequently, that I would not feel so much at home as if I were talking to an audience where I



Pergola, Sir Edmund Osler's grounds.

had some acquaintances. But the first man who met me at the door was a prominent citizen in my own riding, and then I looked around and the more I looked the more friends I saw.

All that Mr. Sinclair has said is quite true, but I think you all appreciate that we live in a very sparsely settled province, that the average man on the farm has too much land, and when he feels that he can't get over his fields properly it is not to be expected that he will take very much interest in his home plot and the surroundings of the home itself. It is quite a natural consequence of the conditions under which we live. But it is our ambition to overcome this apathy on the part of the average man on the farm. Everything must be done to make the farmers' home life as nearly what you would find it in larger centres as possible. We are moving rapidly. We have the rural telephone which puts him practically on the same footing as far as telephone service is concerned, with those in the

centres. We have rural mail delivery throughout the more populous settled portions of the provinces. Now we are launching out on the improvement of highways. We are going to revolutionize conditions on the farm.

Not only that, we are working directly on the home. We are, through the school fair in connection with the Education Department, going to revolutionize the viewpoint of the rural population of this province. In a generation there will be an entire change—the boys and girls who go to school now are appreciating, as none of their fathers and mothers did, the beauties of nature and the advantages that come to the average one who is born in a rural community. Through our school fairs the boy and girl are having an insight into nature in all its phases, as has never been done until the present time.

It is our ambition to develop agricultural training in the schools. It has been the ambition of our educationists since the time of Dr. Ryerson, for agricultural text books to be used in the public schools. But they do not seem to have met the condition, and I am pleased to know that the idea of agricultural, special agricultural training, technical training you may say, for the rural schools is rapidly increasing. There were no less in this last year than 1,000 schools in the province in which classes were carried on in agriculture, and of those classes about 600 or 700 of the teachers received special training in the short courses at Guelph which have been carried on for the last few years. A very encouraging sign this last season, was that we had between 400 and 500 teachers attending this short summer course. These are all lines along which we are proceeding, and it is natural that Horticulture should be included in them. I quite appreciate what our Mr. Sinclair says, about extending the work and keeping before the average man or woman the desirability of spending a little of their leisure time in beautifying the home.

With regard to a movement which is under way for a memorial to those brave lads who will not come home and also for the beautifying of our province for those who do, I have had several communications this last few weeks with regard to bringing over seeds of the Flanders poppies to perpetuate the flower here. The Flanders poppy will last as long as the poem of the late Dr. John McCrae, which we must appreciate as a classic, and consequently the poppy of Flanders fields will always be remembered. It was a natural inspiration to the average person to think that they would like to introduce the poppy from Flanders field into Canada. As I desired to have the best information available I asked the Professor of Botany at the Ontario Agricultural College for a report on the matter, which is as follows:

“Varieties of the European poppy have been many times introduced into Canada and grown in gardens. So far as I am aware there are no records of poppies having escaped from cultivation and become troublesome as weeds in cultivated fields in Ontario. This fact, however, does not make it safe for us to assume that the poppy might not become a weed in Ontario if it were introduced wholesale by various patriotic committees throughout the Province.

“In England and Europe the poppy is one of the common weeds of grain fields. Prof. Percival, Professor of Botany of the South-eastern Agricultural College, Wye, England, writes as follows concerning the poppy: The seeds of the poppy are small and many of them lie dormant in the soil for several years, springing up whenever the season is favorable. On this account poppies are difficult to abolish completely when once allowed to seed.

“In view of the fact that the poppy is such a common weed in grain fields in Europe and that the seeds have considerable vitality and will remain dormant in

the ground for several years, it seems to me that there would be considerable risk that the poppy might become a troublesome weed in Ontario if it were introduced wholesale for patriotic purposes."

You will see by this that the plant is not a very desirable one from the cultivation standpoint. It is inclined to spread and take possession of the soil.

In regard to that memorial, possibly you look on your Society as one dealing with flowers, but I know that you appreciate that the planting of trees is kin to your operations as an organization. It has been suggested in the States—I understand it is taken up quite enthusiastically in some sections—that one of the best forms of a memorial is the planting of trees. We want in every part of the province to commemorate in some way the boys who went from any particular centre, and it occurs to me that there is nothing we can do as a people that will fill the position as much as planting trees in squares in our church yards, in our school yards—memorial trees to the boys who will not come back. And then the idea can be extended in various ways—planting along highways. I understand one of the States of the Union has undertaken to plant along both sides of a highway for 400 miles as a memorial of the work that the boys in that state did. It will be an immense inspiration to the boys and girls who are growing up if they can have something that they can point to as a memorial and recognize that they in their community were represented in the war and are represented in the graves of Flanders. This is an idea I am throwing out to you for your consideration. The avenues along which you can work could scarcely be enumerated. And all I can say as a member of the Government is that we will enthusiastically support you in anything that you can do to beautify our fair Province. We have one of the most richly endowed tracts of country in the world and possibly we do not appreciate it. We are going to appreciate it from now on more than we have ever done. We as a people are lacking in appreciation of ourselves. We had not any idea of what our boys who went overseas would do for us, but they have written the name of Canada and Ontario large on the map. That is an indication of what we in Canada can do. We have the initiative. Our country adapts itself to individual action more, perhaps, than any of the old European countries do, and that is where we expressed ourselves through our boys. This afternoon I had an illustration. In crossing the Canal Du Noir which was necessary for the capture of Cambrai, our boys were on the left; on their right were the British Tommies, and it was left with the initiative of each Army corps to make their way across the canal. The British Tommies had the idea of making mats out of straw and piling them on wood, and making a kind of raft to carry them across. This was a tedious operation and took a long time, and many men were lost. The Canadian boys drove several of the British tanks—first one in and down, then another over top, and they had a bridge across the canal in a few hours. That is an illustration of what we can do with initiative. What the boys did we can do as a people, as communities. We have the initiative, and we ought to have the spirit to do more for our communities, to improve our home surroundings in the rural parts of the province particularly, so that we can keep our population on the farms and invite more back to them. We are going to try to perfect conditions on the farms, so that the people will tend that way, more than they have done in the past generation. It is a big task, but a worthy object.

REV. A. H. SCOTT: Before the Minister of Agriculture, who is paying us to-night his first visit, retires, from this place, I would like to express to him our gratitude for his presence here this evening. It has been my privilege and pleasure

for quite a number of years now to listen to the heads of the Department of Agriculture on our annual occasions. We have had occasion to go to these Ministers when outsiders thought that we were begging. We have brought intelligence with us in making these requests, and we have approached the Minister of Agriculture in days gone by in a large way, and there has been no Minister in my recollection who up to the present time has not met us in a cordial, and large way, and it is to me a great delight to-night to hear the Hon. Mr. Henry make reference to two things, particularly when he says to us that there is an absence of appreciation on the part of the inhabitants of the development and beauty of Ontario. That word from him should be spread broadcast, and we should try, in so far as our influence goes, to spread the gospel from the north to the south and from Port Arthur to my native Glengarry, that we have here in Ontario one of the most favored portions of the earth upon which the sun of the heavens shines.

I am glad in the next place, to hear him say that he comes as our friend. We want to be friends in this Association, of the Department of Agriculture, and we want the Minister of Agriculture to feel that we are his friends, and we hope for him in his new position a distinguished career, and, while it lasts, that there may be glory, agriculturally, horticulturally and glory in every other way, pertaining to his administration. I therefore have great pleasure in moving in this formal way, that this Association express appreciation of the visit and of the words of the Hon. The Minister of Agriculture to-night, and hope for good things to be the outcome of his first address to us.

WM. HARTY: I take very much pleasure in seconding that motion. Carried.

SURROUNDINGS OF THE HOME.

THOMAS ADAMS, CONSERVATION COMMISSION, OTTAWA. (Illustrated.)

The unit of the city or town is the home. Town planning has to do with all the elements in the growth of a city of which the home is the most important. The home has to be linked up with the factory by means of facilities for transportation so as to provide means of livelihood for the family. There have also to be facilities for marketing products and for all the intricate ramifications of trade and industry. The three main things which combine to make the city are its industries, its means of transportation and its homes.

We can plan a city so as to secure the greatest efficiency, but we do not plan them. By letting them grow anyhow we may secure efficiency, but that is by accident and not by design. As there are vested interests in existence which thrive on inefficiency and which are very powerful, the difficulties of getting improvements are considerable. I have said that the home is one of the chief elements in the city or town. It is there that we have the nursery in which we develop the men and women who are the chief factors in industry. The successful country is not the most prolific in population, but the one which has the highest quality of population. To get a high quality in our citizenship we need to have good homes, and to get good homes, we should have beautiful surroundings. Why should the poorest citizen not have a beautiful home? Poverty should be no barrier to it and the only excuse in our democratic country for bad home conditions should be the defects of the individual over which we have no control. In the surroundings of the home the

chief defects are, however, not with the individual but with our social organization. The individual may be responsible for a dirty room, broken plaster or for neglect of sanitary fittings within the house. But the things that are most wanting in our poorest homes in Canadian cities and towns are the things which the public should provide and which they have neglected to provide. The individual is hampered



Garden path.

in securing a sufficient garden space by reason of the expense of acquiring land under the present system of development. He cannot get the quantity of land in Canada which he can put to profitable use but only the quantity which he can pay for at a high price. He is not responsible in cases where water is not laid out to his home and where, as in thousands of cases, the woman of the household has to get water from a tap in the open, under our difficult climatic conditions. He is

not responsible for slops and other foul drainage being permitted to go on the street for want of sewers; or for defective construction of his building, or for lack of adequate sanitary fittings as a preliminary condition of occupancy—these, and other things, are matters which can only be controlled by the public. The cases in which they have been provided and then abused are probably comparatively few and yet, one of the principal excuses for not providing them is that will be abused.

To get improved surroundings in our homes in Canada we must plan our cities. In planning our cities we must have regard to the provision of open spaces for public parks and playgrounds which in that town must be properly linked up with the factory and the home and not too remote from either. We must also provide garden space and educate the worker to make his home beautiful in its immediate environment. Our Canadian workers' homes are less defective on the whole, however simple and inexpensive they may be than is their surroundings. Personally, I would prefer the simplest wooden dwelling with plenty of light, air, garden space, good water supply in the dwelling and good sanitary arrangements, rather than the finest structure without these necessities.

Professor Marshall in his "Economics of Industry" says that there are necessities for efficiency as well as necessities for existence. A wholesome and pleasant home is a necessity for efficiency, if not for existence. We have long passed the day of regarding it as a mere place of shelter. As a matter of fact however perfect our educational system, the home is the chief centre of education, and the mother the chief educator. By this we surely do not mean the structure called 'a house'; surely it implies that the surroundings of the house are an important part of the home. It is in the virtue of the family life that the chief beauty of the home is to be found, but family virtue can only grow in an environment where natural beauty is permitted to enter. The statement that all these things depend on the innate qualities of the individual is as one-sided as the contrary statement that environment is everything. The one is essential to the other.

In the improvement of the surroundings of the home the horticultural societies are playing a great part and probably Ontario is doing more wonderful things in this connection than any other community of its size. I have neither seen nor heard of any communities in Europe, or America, that have obtained such wonderful results from voluntary organization as the horticultural societies of some of our Canadian towns. Incidentally, it is worth noticing that in this matter, as in so many others, it is the small town that is most successful. The future of Canada depends on the small towns, and our efforts should be directed towards increasing them rather than adding to already overgrown cities. In the small town, children can grow up without being divorced from nature, and the slum has no excuse to exist.

THE CONSTITUENTS OF THE HOME.

The constituents of the home are three in number: (1) the site, comprising the land upon which the building is erected and the garden space surrounding it; (2) the local improvements, comprising the pavement, sidewalk and such public services as sewer, water main, etc.; (3) the dwelling or structure.

In considering the surroundings of the home we have to give special attention to the first two, and these are matters which are controlled by public policies rather than by questions over which the individual has any power. However small the

garden space provided, there is, of course, opportunity for improvement by means of the horticultural societies, but the real encouragement on any extensive scale can only follow from provision of having liberal spaces provided for gardens around the dwellings. Members of horticultural societies do not require to be informed that the excuse that is often given for withholding land from a workers' dwelling, namely, that he has not time to cultivate the land and is not inclined to do so if he had time is, as a whole, untrue. If the opportunity is given, the land will be cultivated subject only to proper leadership and stimulus through horticultural societies. We cannot expect gardens to be cultivated where houses are erected on marshes which are not drained of their surface water or which are only rendered dry by having three feet of garbage dumped upon them as the means of creating the foundation for the dwelling. We can not expect to see gardens cultivated and used in remote and isolated subdivisions where there is no means of co-operation, no stimulus to pride and where long hours have to be spent in travelling to and from the city. In regard to the details of planting and beautifying the surroundings of our homes, there is ample ability, intelligence and experience available in every city and town. What I am pleading for is that we want the underlying conditions to utilize these things. The portion of the home that is subject to town planning consists of everything to do with the land and local improvements, as well as the question of the space surrounding it. To get gardens a proper size, to get pleasant means of approach, to get proper and conveniently situated parks, to get less money wasted on unnecessary local improvements we must have town planning schemes prepared in connection with all new development in our cities.

Our avenues of trees are growing up without the care of experts. Our trees require more care to be given to them, whether in our streets or in our parks. We need to study our systems of planting more for the purpose of bringing out the beauty of the individual tree. We need also to impress upon the "man on the street" that trees are worth money and that beauty pays. The beauty of Paris, Edinburgh and other European cities has yielded enormous profits to generations of citizens in these places. In certain real estate developments large sums are spent to preserve trees as a matter of business. This is where real estate operators are dealing with large areas and are able to apply a proper system of planning. One thing that horticulturists should bear in mind is that the things in which they are most interested are not merely required to beautify our cities and towns but are essential to make a prosperous country and are necessary to secure economy in development. The room that is required surrounding the home to grow flowers is required to grow citizens in a healthy way, and healthy citizens are needed to build up our industrial welfare. The grass margins along the streets and along the side of the car tracks reduce the dust which in itself is a producer of disease as well as discomfort, and the trees which we grow in our gardens and streets are essential in our climate; and we need to provide space for them, not because they are pretty to walk under but because of their necessity as shade. The horticulturist is therefore one of our constructive statesmen. He is building better than he knows. He is a great co-operator; for the strongest co-operative organizations are the horticultural societies. They are the strongest because sentiment is combined in them with enlightened self-interest. The co-operative principles of these societies should be applied to the organization of our cities and towns, and we need to prepare great co-operative plans in which the surroundings of the home will receive proper attention. Surely there is enough land in Canada to give everyone a garden who wants it. In all our cities there is also enough waste land comprising ravines

and hills which is adaptable only for parks and should be reserved for that purpose. In the placing of public buildings more regard will have to be paid to their surroundings as well as to the surroundings of the home. In all these matters we do not want to spend less on the things in the home that are needed for cleanliness, health and morals, but much of the ostentatious ornament that is used in building might well be left out and the money spent on more beautiful natural surroundings. We could even do with a little less asphalt and concrete if the home itself would be made better as a result. Some people would prefer to live in a hen-house rather than do without a concrete sidewalk. There are extremes in these matters that want to be avoided.

I have not pictured to you the ideal home. The things I have talked about are things that are realizable under proper organization. The horticultural societies have already done one magnificent service to the citizens of Canada in that they have dispelled the notion that the people don't want gardens and don't love gardens when they get them. Their next service is to see that our cities and towns are so planned that in their future development no worker will be without a garden who wants it.

As Oliver Wendell Holmes has said, the education of a child begins 100 years before it is born. We educate the child of 100 years hence in the slums on the one hand, and the garden suburb on the other. Our weakness or strength will depend in the future on which kind of surroundings we have for the homes of to-day.

Many of you are considering war memorials. See that they are placed and designed to add to the beauty of your towns. One I have seen has been erected on a beautiful park and obstructed the best view. The surroundings of memorials are as important as the design of the memorial itself. Do not erect a glorified tombstone, but something of refined beauty with nature and art combined. Nature is simple in its beauty. It is never vulgar and ostentatious. Its charm largely lies in its simplicity. It is the same with art. The beauty of nature, too, lies largely in its lights and shadows and the niceness of proportion. So it is with art. Let your monuments be not only an expression of your patriotism but add beauty and refinement to the surroundings of your children.

JUDGING AMATEUR GARDENS AND VEGETABLES AT EXHIBITIONS.

A. H. McLENNAN, VEGETABLE SPECIALIST, TORONTO.

This subject is one that is not easy to deal with, as, up to the present time there has been no approved literature which would give all judges the same idea of the types of the various vegetables shown at an exhibition. This applies, of course, to the latter part of my subject more than to the former, although, in judging vegetable gardens, we should have similar ideas in mind.

In all judging work the idea that should be kept in mind by the judge is the final destination of all vegetables. This ultimate consumer is, in all cases, represented by the housewife who buys the material for the household meals and prepares them. With most women in such a situation the first consideration is the getting of as much value for her money as possible. This is especially the case among the working people, who, after all, form a large proportion of our population.

Starting with this idea in mind and taking the subject as it divides itself naturally, our first thought should be given to the gardens. For this judging I have made out a schedule of four points which appears to me to cover everything connected with the work:

1. Appearance of the garden 15 points
2. Condition of crops..... 5 points
3. Freedom from disease and insect injury 10 points
4. Use made of land 20 points

The first mentioned item would cover the cultivation of the crop; the amount of weeds and the general appearance of the crops as a whole. The garden should show freedom from weeds and have a mulch on top which would indicate that the cultivation had been thorough and well-timed throughout the season. The judging should not take place at one time but should be done in a series of three visits during the growing season: say the middle of the months of June, July and August so that you would have a thorough idea of just what interest the owner had taken in producing first-class vegetables. The second point in reality is partially covered by the first. I mean that the judge should make a more intimate inspection of each individual crop, noting how well each crop is growing and whether the plants had been properly spaced so that each individual will have every opportunity of becoming as perfect a specimen as possible. Freedom from disease and insect injury should be carefully noted, for if one is really interested in his garden work he must become fairly well acquainted with the various enemies that attack his growing crops. One cannot expect to grow fine specimens or get the most returns from his garden if disease and insects are allowed a free hand, and, as a sure remedy is available for most of our garden troubles, there is no reason why the amateur gardener should have many of these in his garden. The fact is that he should show a cleaner garden, in this respect, than would the commercial man because his area is limited and everything is under his own eye, while the commercial has to depend largely on hired men who cannot be as much interested as he is. The last point, and to my mind the one which requires more careful noting than any of the other three, is the use made of the land by the gardener. Too many people who have a small garden think that one crop a year is all that a piece of ground should produce. This one point brings out whether the man is really a gardener because a man who grows more than one crop on a piece of ground in the season, showing that he is really studying what his land will produce and how the crops grow, is doing the most good to his fellow men. It is not the number of crops which are grown in a garden that count because one could grow very small quantities of a large number of varieties but the fact that the man is producing at least two crops in a season where the ordinary individual would only produce one.

Turning to the second point in our subject the rule mentioned in the first part of my address should be applied most rigidly. I have attended many exhibitions throughout the Province in the last ten years; as well as in many parts of the United States, and it seems to be the general idea that size instead of quality should govern the awarding of the prizes. I was told a story this fall by one of the District Representatives concerning a boy exhibitor at one of the school fairs. This boy had been a consistent winner but this year fell down on one of his exhibits which was a class of beets. In speaking to the Representative after the prizes were awarded he said that it was his own fault that he had lost. When asked by what standard he chose his exhibit he said that he always noticed that his mother picked medium sized beets to cook and that the smaller sized ones were always the first

that were removed from the dish. This illustrates the point that all judges should keep in mind more fully than anything else. I would advise men in judging vegetables in competition to keep in view four main points.

- 1. Appearance 5 points
- 2. Size..... 10 points
- 3. Freedom from disease and injury 10 points
- 4. Eatability..... 25 points

Taking these in order: The appearance of the entry as it catches your eye when you first look over the exhibit; the general cleanliness, evenness and size; and the impression given you through the general appearance that the man really is taking an educational interest rather than considering simply the money value of



Vegetable Garden, Craiglea.

the prize. Size has probably been a more debatable point than any other in judging all vegetables. Too many judges consider size more than quality. They forget that these vegetables are not intended for animal consumption but for human beings and that the rule will not apply to the latter. But few of them consider the well-known fact that most vegetables, after they have attained a certain size, begin to lose their quality and become to a certain extent unfitted for human food. There are, of course, a few exceptions and among the root crops parsnips should be judged by size to a large extent because when properly grown a large-sized parsnip is of higher quality than a small one if both are equally smooth. No specimens should be awarded a prize which show disease or injury unless there is a good reason for allowing such to pass. This last refers more especially to injury, as sometimes vegetables shipped by express have been injured through no fault of the exhibitor. The last section, and to my mind the most important of all, is one which is con-

sidered the least in many cases. If everybody would remember that all is destined for human consumption there would be fewer mistakes made in exhibiting. The medium sized, smooth vegetable, free from injury and disease, fresh and dainty looking, one that attracts the eye of passers-by, one that we would desire for our own table is the one that in all cases should get the prize. Where more mistakes than usual are made is in judging of root crops and celery. All root crops should be smooth with no side roots showing, no sign of sunburn on top and with the exception of the parsnip should be medium in size. In regard to celery the valuable part of this plant is the heart. For that reason we should look there first of all to see that each specimen in the exhibit carries a large share of heart and that the stems are only medium in size, ribs close together and showing as much length of white as possible.

I have tried in this small way to give you a few of the points that we should consider in judging, but my personal preference would be to have the specimens in front of you to show you exactly what I mean in each case.

TEN YEARS' EXPERIENCE OF NEW ONTARIO.

R. WHORLEY, HAILEYBURY.

To attempt to illustrate ten years in a few minutes is an impossible thing. New Ontario is more interesting than the average; by the man or woman living in Southern Ontario it is spoken of as the frozen North.

Eleven years ago, making up my mind to try a new country, I decided to come to Canada. To my mind from Quebec to North Bay was to me, an English green-horn, a wilderness. On the 12th of May my friend and I left North Bay for Haileybury. At first it appeared to me to be a round about route. But it soon proved to be very interesting as the trees, rocks and lakes came in sight. As we neared Temagami they became more beautiful; this place is noted for fishing and visitors. On arriving at Cobalt the great silver camp came in sight, the appearance of which I have no time to dwell upon, but taking a bird's eye view of the place to my mind it should have been called "All Nations" for such it is.

Our next stop was Haileybury our destination. I was struck by the amount of mud at that time of the year. It was running in the bottom of the rig amongst our trunks. We had no friends and no home. Hotels and every place were full up. This was in the boom days. Hammers were clinking Sundays and weekdays in order to get covering and homes, or shacks, as they were called. I must admit that I thought some of them were for poultry houses. But that night I soon found the need of one, as we had to sleep on a verandah which would have been comfortable had it not been for the mosquitoes. Not having been prepared for such a reception I will leave you to judge our plight.

On Monday I took a bird's eye view of the place, the Lake (Lake Temiskaming) still frozen over, the sun hot in the day time, many new buildings going up and all kinds of work going on, but no gardening except the late Colonel A. M. Hay, Mr. Foster and Mr. P. A. Cobbold. Colonel Hay was employing a gardener, Mr. Cox, an Englishman. I made his acquaintance and discussed the possibilities of the place. He said that it was a rough country, but to a good all round man he thought that there was a good opening.

The next day I started work for my first master in Canada, who is a friend of mine to-day. He is a traveller, who lives when at home in Toronto. He often visits us on his travels up North, and has a walk round the ground and greenhouses, and is surprised to see the various kinds of flowers and vegetables, which he never expected could be grown so far North as Haileybury. The next man I worked for was Mr. E. Wright, who was the discoverer of the Kerr Lake Mine. And when I had completed his lawn and garden with seeds and plants the passers by began to be interested. I then had more work offered than I could possibly handle, labor being hard to obtain and big wages being paid for the same. I employed two laborers, my two sons came up, and during the season we completed a number of lawns and gardens. Neatly trimmed lawns, flowers blooming and trees planted soon began to make things look like home surroundings. Unlike many commodities this can only be done by a practical experienced landscape-gardener, who understands gardening in all its branches and there it a lot of hard work, worry, and patience involved to complete same. Our Horticultural work was all up hill when so few understood gardening.

I saw it was to our advantage to buy land and build, and having laid out Mr. A. Ferland's garden I approached him as to the purchase of seventeen town lots which were bush over-looking the Lake, and commanded a splendid view. This I thought would suit our purpose, so I purchased. We commenced to clear it up but bad weather began early in November which stopped our progress. For our winter's work five of us began a small wood business, cutting the wood by hand, but we soon found out that it did not pay. I am describing this to show you how we climbed the ladder to success. Next we got a gasoline engine, made a saw bench, bought a saw, and found we had an outfit to cut from fifty to sixty cords in the ten hours. We made expenses and gained experience which proved valuable in the future. I fancy I hear some one say "What has this to do with Horticultural Work," but let me show to such that these hard stones had to be broken to pave the way for future success. Spending other peoples' money is a different matter from making a garden, while having to earn the money to paddle your own canoe and live and pay expenses.

Spring time arrived and I had work for thirty men. My wife and family expected to arrive in July, and there was no home, only a small shack. In June my two sons took typhoid fever, and I worked in the daytime and took care of the boys at night, making a twenty-four hour day's work. You all know the value of a mother as a nurse, and on her arrival my wife nursed the boys, but soon contracted the fever herself and three of the other children too, making a total of six laid up with the fever. After their recovery they prepared to return to England again, but after meeting friends they decided they would stay and give it a trial anyway. We cleared our land and built a little addition, and by degrees arrived at our present position. Of course this could not have been done but for my wife and family who worked so hard.

I spoke to my friend Mr. Cox regarding a Horticultural Society, and we got busy with the help of Mr. Lorne McDougall, Mr. P. A. Cobbold and others. We soon secured enough members to obtain our grant, and were able to show to those who were hard to believe, the possibilities of the Frozen North. Our members are worthy of many thanks for their work in helping the Society along. Almost every home has its flowers and vegetables growing, many of them to be found growing amongst stumps. Although a bad season last year, our market was well supplied with vegetables and potatoes. Rather different to ten years ago when all had to

be shipped from outside points. I have no need to speak of flowers, as Mrs. McDougall has given you a good illustration in this line. I must however, mention that we have a shorter season than yours, and great care must be taken in raising and not planting out before the first week in June. This is the time we plant flowering annuals such as all kinds of Asters, Stocks, Antirrhinums, Alyssum, Ageratum, Balsams, Candytuft, Annual Carnation, Cosmos, Calliopsis, Salpiglossis, Larkspurs, Lupine, Celosia, Gypsophila Elegans, Petunia single and double, Godetia, Marigold all kinds, Mignonette, Nicotiana Affinis, Nasturtiums, Phlox Drummondii, Poppies, Sweet Peas, Salvia, Portulacca, Zinnias, Annual Delphiniums, Pansies, Dianthus, Canary Creeper, Everlastings and many other kinds do well. All herbaceous plants grow well,—Delphiniums, Phlox, Gypsophila, Paniculata, Gladiolus, Monthretias, Guillardia, Hollyhocks, Helianthus, Lupines, Lilies of all kinds, Dahlias, Show Cactus, Pom-Pom, and plants in this class could not be grown better in any place in Canada. Of greenhouse plants we grow what pays best, such as cut flowers for the store and for florist work. We also market all kinds of bedding plants and they do well, Climbers including Roses, Clematis, Jackmanii, Montani White, Virginia Creeper, Cobaea Scandens and others. Almost any kind of flowering shrubs will grow such as Lilacs, Hydrangea, Paniculata, Spiraea, Snowball, Honeysuckle and Bulbs the same.

There is no place better for such fruits as Strawberries, red, white and black Currants, Raspberries, Gooseberries of all kinds, Crab-apples and a few Apples. I have seen a few grapes but have not grown any myself. All kinds of vegetables from a turnip to a mushroom will grow with a little care. Potatoes of all varieties can be grown if care is taken from the time of planting to uplifting. Let me say that the time is near at hand when we will share in your markets for Northern grown seed. The best kinds only should be grown, and care should be taken in uplifting and grading, first for table use and then for seed. Keep all soil and stones out of bags and make the weight ninety pounds which should be the standard weight in all markets. Let me call your attention to my new Potato "Northern Star" a good mid-season and winter kind. Two bags of these potatoes, last season, produced forty-four bags. All seed potatoes should be greened before storing away if possible.

Our greater production scheme did good work, as people who never had attempted to plant a potato before made good gardeners. All vacant lots were planted, and I have seen women and children planting vegetables and potatoes amongst stumps, making an attempt to grow something.

Our Chairman, Mr. P. A. Cobbold, and his committee are worthy of many thanks for the good work they did in encouraging the Greater Production Scheme.

CHILDREN'S GARDENS.

Much has been said and written from time to time on this subject, and we hear much from various sources of the success attending this branch of our work in Southern parts of Ontario and those parts of the Province where the conditions, contrasted with those of the North, are almost tropical. In this section, Temiskaming, the work has been carried on for the past seven years under the auspices and guidance of the Haileybury Horticultural Society with splendid results. When one considers climatic conditions, together with the depredations of wandering cattle, the children have shown no small amount of perseverance. All classes of gardening have received attention viz:—vegetable, fruit and flowers. The prizes that have been given have not been of a large amount to attract for their value in dollars and cents, and the

children have directed their energies without exception with the object of showing what they could do. The results obtained have been altogether surprising, and the directors have knowledge that this has been entirely due to the labor and attention bestowed upon them by the youthful gardeners. One exhibit, viz., that of pressed flowers calls for considerable trouble in so far that the name of flower given, where plucked, and the nature of it are called for. This exhibit in common with the rest always fills and it is entirely due to the generosity of one of our oldest directors that the interest in this section has been maintained. Prizes have been given every year by this gentleman, Mr. P. A. Cobbold, and not only in this but in other sections the society is indebted to him for his untiring zeal and energy.

The youngsters certainly show a great amount of persistency in persevering in spite of bad seasons, prowling cattle and the usual amount of bugs, and they always manage to come out on top. This is a branch of the work that certainly needs encouraging and the parent society should keep in view the fact that the habit of gardening and resourcefulness in this direction, should be rendered all the assistance possible; and should be taken into account when the annual grants are made. No doubt some of our friends who live in more favored localities will not attach much importance to this, but when one remembers that our season for planting begins at the end of May and we encounter frosts sometimes the third week in August there must be a tremendous amount of enthusiasm shown to get any satisfactory results.

SEEDS.

Since our Society became affiliated with the Mother Society the Frozen North is the open door for seeds to the extent of \$12,000 to \$15,000.; namely onion sets, vegetable and flower seeds. This is not including agricultural seeds or potato sets. This amount is spread amongst the different nursery-men and seedsmen. Also yearly a good sum is spent in trees, herbaceous plants, etc. through different firms sending up representatives.

I am sorry however to say that the war cleaned most of the British gardeners out. During these last two years we have been shipping out, instead of bringing in vegetables and potatoes, and there is no wholesale store in the place as there used to be.

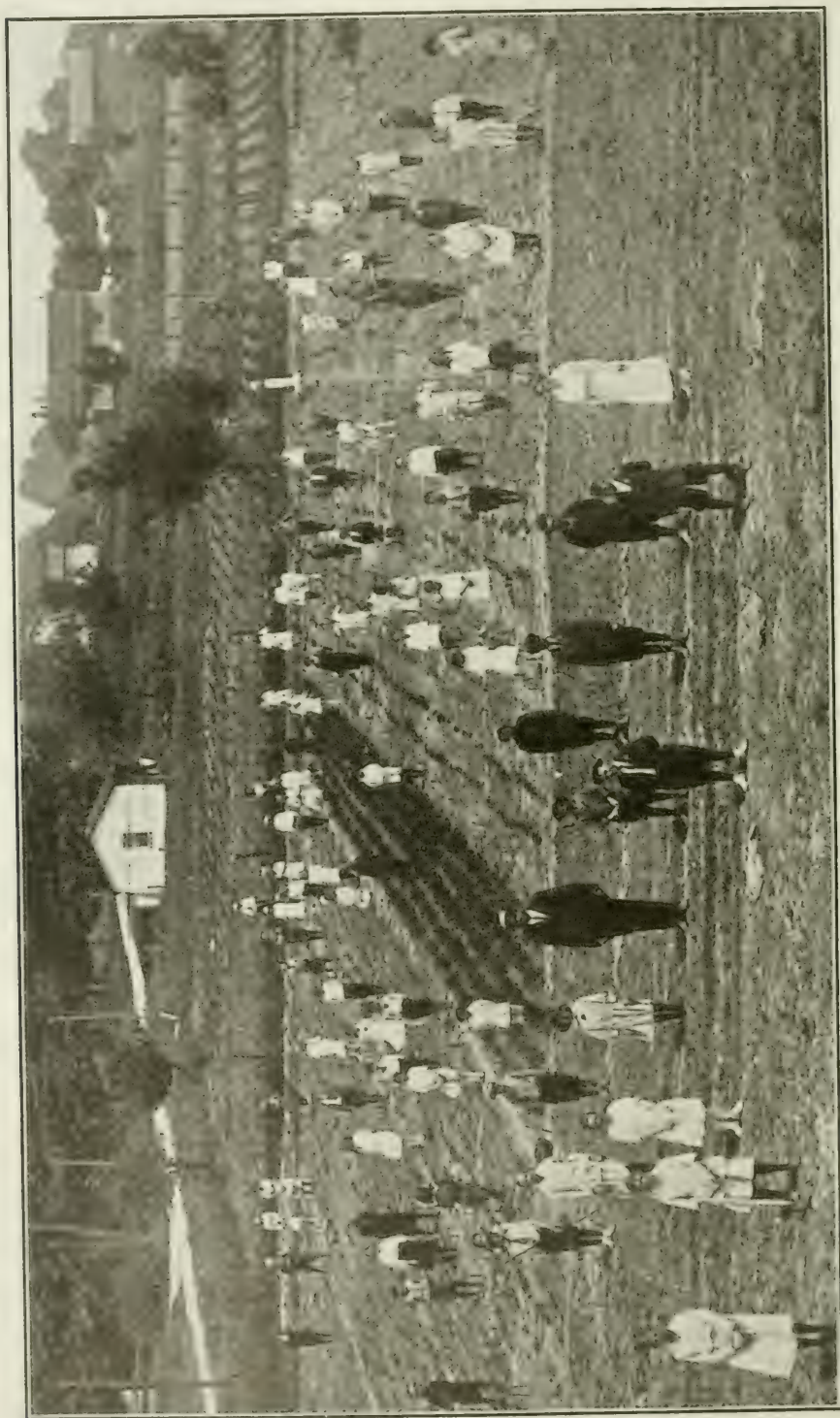
Let us then look back upon the past as encouragement for the future, and thank God and take fresh courage in our work.

GREETING FROM THE AMERICAN CIVIC ASSOCIATION.

The Superintendent read the following telegram received from Washington, from the President of the American Civic Association.

"The American Civic Association extends to the Ontario Horticultural Association in Convention assembled hearty greetings for successful and fruitful meeting. The cordial relations existing between our two organizations for over ten years have worked for the good of our sister countries, and in the stressful days ahead of us it is hoped that co-operation will be even closer. With best wishes."

(Signed) J. HORACE McFARLAND, *President*.
E. E. MARSHALL, *Secretary*.



Youthful Gardeners at Elora.

HORTICULTURE IN OUR SCHOOLS.

S. B. MCCREADY, TORONTO.

I desire to congratulate the Horticultural Societies in Ontario on the magnificent work they have done in the last year or two in promoting greater production. As an officer of the Organization of Resources I have come in touch in a great many places, with Horticultural Societies, and have learned of the fine service they have given in this cause. As a matter of fact, our organization had the responsibility to a certain extent of promoting production, and where there was a good Horticultural Society we found that we had no job at all, as it was already in hand. I congratulate this Association, too, on the great opportunity that lies ahead of you in the years to come. You are celebrating to-day your thirteenth birthday. I wonder what your record will be thirteen years from now. If it is not twice as great and many more times than that as great as it is now, we should be disappointed and should be inclined to say that you had failed in your opportunity. To my way of thinking there is no branch of the Civil Government, possibly apart from that of the Department of Education, which has before it such a vast field of fine service for healing the wounds of this old world, and our distresses here in Ontario particularly, as the Horticultural Society. I was just looking up in this connection some of the figures regarding our population, and I find that we have in Ontario at the present time, so far as the latest statistics show it, 43 places in the Province with a population of over 10,000 each, or 40 per cent. of all the people living in Ontario. There are 20 places with populations between 5,000 and 10,000; 67 places with populations of from 2,000 to 5,000; 74 between 1,000 and 2,000; 169 between 500 and 1,000, making in all 373 places urban communities, with a population of a good deal more than half of all the population of Ontario.

In addition to that, I notice there are 377 places with a population of between 200 and 500.

I am quite convinced from what I saw recently out in Agincourt, a village of about 300 population, that there is fine work to be done in Horticultural Societies in even such a small centre. They have a very thriving Society and have done magnificent work, not only for the village but all the country around.

There are over 700 places in Ontario with populations of over 200. If you add all the townships in Ontario and the little places below 200, which might very well be organized into some sort of horticultural scheme, with the 528 townships, we must have somewhere around 1,500 communities that would be, I am sure, benefited greatly by a Horticultural Society.

So I congratulate you on the magnificent chance that you have undeveloped before you. It should be an inspiration in these times when conferences are at work to settle things in this world and to make things better for us in Ontario to find this work lying ahead of us. I congratulate the Ontario Horticultural Association on giving this subject of Horticulture in the Schools a place on the programme of its Thirteenth Convention. I venture to affirm that as the years go by the Association will find its best response to service in the work carried on in co-operation with the schools. It is well and good that every effort should be continued to stimulate the horticultural activities of grown-ups.

There should be a Horticultural Society in every community in the Province. But it is wiser and better, in the opinion of an old schoolmaster, that steps be taken to see that the "growing-ups" be wisely led and instructed in their forma-

five years. "As the twig is bent so will the tree incline." Would you have every Ontario home a garden-home in the years to come? Then look after the children now. Would you have every citizen of Ontario a lover of gardening? Then plant your seeds in children's hearts. A little child shall lead them."

Great is the opportunity of the Horticultural Society for the highest service in nation-building. Education must be recognized the world's greatest force for healing the hurts of the nations. And while Ontario may not be suffering from the social and economic distractions that torture our fellow mortals in other places we have a share of the world unrest that requires the ministrations of wise and beneficent teaching. The Ontario Horticultural Association can deal with no more important matter at this Convention than that of creating a Province-wide interest in the teaching of Horticulture in the schools.

Let us briefly compare the services of Education and of Horticulture to see whether or not they have any common aims. What are schools for? Why does Ontario maintain at great cost a system of elementary, secondary, industrial and normal schools as well as a Provincial university? It is to ensure a free, progressive, intelligent, democratic citizenship. The State recognizes that good government and a safe democracy are fundamentally based on character, loyalty, industry and intelligence. We want our boys and girls to grow into good, strong men and women, imbued with a high sense of service to their country and their fellow citizens; we want them to be industrious and thrifty without being carried away in gross materialism; we want them to be capable of getting the best out of life in their work, in their leisure, in literature, in music, in art, in their homes, in their churches, in their schools and in all the activities and companionships that a busy world may bring them. These are the services of Education.

And how does Horticulture function with these factors for good citizenship? Horticulture is the ancient and obedient hand-maiden of Education. In a peculiar sense it can help to produce the very fruits that the school aims to yield to society. A good gardener cannot be, nor have, a bad character, but a bad character may be transformed by gardening. Gardening brings health, better food and better living, love of home, intimate knowledge of Nature and Nature's God, revelations of new meanings in literature and music and art, relaxation from worries, and peace of mind, release from the world's fripperies. A garden furnishes an unexcelled laboratory to train children to work, to observe, to learn by practical experience, to share in the responsibility of making their own living. Happy is the teacher whose pupils are gardeners. Basing instruction on their interests and practical experiences her teaching becomes easy and effective. That teacher is to be pitied who has not yet learned how Horticulture may help her in her great work of training for good citizenship.

Horticultural Societies have at the present moment the greatest opportunity they have ever had for "educationalizing" Horticulture in Ontario. Such an opportunity may never occur again. Everyone has been a-gardening during the past few years. Governments, Town Councils, School Boards, Rotary Clubs, Churches, Boards of Trade, manufacturers, Citizens' Leagues and Women's Clubs have given their support to the movement. Boys and girls, men and women, farmerettes and soldiers of the soil, Girl Guides and Boy Scouts have all been busy. The Y.M.C.A. have co-operated. Schools, colleges and universities have made concessions to food producers. Public opinion is ripe for a forward movement. It will be a calamity if we cannot realize large returns for posterity from the widespread interest in Horticulture brought about by war necessities.

The war has exposed what too many failed to see before 1914, that food

production is the world's first great concern and that there may come a time when every individual has a personal responsibility in the matter. The war has disclosed, too, to many who never saw it before, the weakness of a State that has become top heavy with urban population. We may yet have to adopt the precautions, which Sir Thomas More's Utopians employed in their ideal State, of making the city dwellers move into the country every two years to take over the work of the farmers, so that no one should be allowed to forget how to produce his or her own living. Toronto and Hamilton and London and all other ambitious places may have to pay a very dear price for doubling their populations. I note that one of the conclusions reached by the recent conference of Provincial Premiers and their associates to the Dominion Government was that steps should be taken to induce people to go back to the land from our Canadian towns and cities. Here lies work for the schools and the Horticultural Societies.

SUGGESTIONS.

Permit me to suggest some things which members of Horticultural Societies may do in this behalf and some aims towards which they should attempt to educate public opinion.

1. **SURVEY THE LOCAL FIELD.** Make inquiries to learn to what extent the boys and girls of the town are practically interested in gardening. Pay particular attention to those who have lived over stores, those who live under unfavorable home conditions, those who are on the streets at night.

2. **CONFER WITH TEACHERS AND SCHOOL BOARDS.** If the teachers of the school and the members of the School Board have not considered the encouragement of children's gardening as part of the service of the school, arrange for a conference to discuss the whole matter and see if a start cannot be made. If the work has been started and dropped or it has been unsuccessful seek to find out the causes, and, getting the advice of places where there has been success, make a new start.

3. **INFORM YOURSELVES OF DEPARTMENTAL PLANS.** Make yourselves acquainted with that part of the Nature Study Course prescribed for the schools by the Department of Education. Send for the Course of Studies. It will be found that within that there is ample provision for all the gardening that the schools may be expected to look after as well as room for freedom and the exercise of initiative. The work does not need to be withheld from the children because there is no teacher on the staff specially certified.

Become acquainted also with the plans of the Department of Education for systematic instruction in Agriculture and Horticulture in graded schools. You may discover that there are teachers on your school staff who are equipped for this service but who need encouragement and assistance to make a commencement.

4. **ADOPT GARDEN-ORPHANS.** In seeking to have the school take a hand in the work, do not forget that an ounce of mother (or father) is worth a pound of school. Take a personal interest in your own and your neighbor's children. Give them a share in your garden. Help them. Encourage them. Adopt garden-orphans. There may be some poor wee forsaken mortals who if they cannot be taken into your homes, may at least be taken into your garden to be cherished. You can do what the school can never do. The school's effort has the weakness of the effort of all organization, it may not be able to express personal sympathy with the individual. The school needs every horticulturist's co-operation.

5. **BUILD FOR PERMANENCE AND CHARACTER.** Adopt a policy that will be self-containing. Let your plans develop initiative and independence of teachers

and pupils. Count your one-year-flash-in-the-pan a failure. Do not stress competitions; it is the co-operative spirit which the world needs for settling community problems. Be careful of prize-schemes; it is not desirable to develop a generation of pot-hunters. Take heed of indiscriminate distributions of seed, etc. Children who are trained to look for "hand-outs" will grow into citizens who will be "leaners." Horticultural Society activities with children should not be directed primarily to getting increased crops of vegetables or more flowers but rather to assist the schools to turn out better citizens—and better because they are interested in growing plants.

6. CARRY ON YEAR-ROUND PUBLICITY. The local press will probably welcome short and timely horticultural suggestions and articles, particularly if they have "local color." Aim to reach parents, teachers and school children in some of these. Encourage the children to report on their school gardening work through the growing season. Arrange for talks in the schools as well as for lectures for the public during the winter months. Have periodical exhibits of children's garden products in the public library or some of the store windows as well as the more elaborate school fair in the fall. Give the children's work a place in the local fall fair.

7. WORK FOR A MUNICIPAL AGRICULTURAL AND HORTICULTURAL SERVICE. In the larger cities of the Province there is a large scope of work for an urbanized Agricultural Representative, corresponding to the County Representative who works amongst the farmers. Such a man should be, of course, a graduate of the Agricultural College and specially trained for service amongst the gardeners, poultry keepers, beekeepers and fruit growers of the cities. In the smaller cities this office might be combined with that of instructor in the schools and director of children's gardening. Assisting this official there should be an Advisory Board made up of representatives from the City Council, Parks Commission, School Board, Horticultural Society, Poultry Association and other organizations working in the cause of civic betterment. His office would be naturally the headquarters in the city for all horticultural interests. There is a vast service to be developed in this matter for every city. Our accomplishments through the stress of war have shown what can be done, and they have indicated, too, how much more might be done through organization and co-operation. If there is ever to be any worth-while back-to-the-land movement from overcrowded cities—a consummation devoutly to be wished—it will have to be originated by some such specifically organized service. In such a scheme lies one of our best hopes for making progress away from slums and towards garden cities—another consummation devoutly to be wished.

8. SUPPORT A FORWARD MOVEMENT IN AGRICULTURAL EDUCATION. The Horticultural Societies of the Province, especially if they are assisted by the Agricultural Societies, may do a great deal to form public opinion concerning the introduction of Agriculture and Horticulture into the High Schools and Colleges of the Province. We shall have missed one of the best fruits of our war-time experiences if we do not see that the splendid work done by the farmerettes and the soldiers of the soil is perpetuated and "educationalized."

Do any of you know anything taught in a school that can educate a growing lad for the highest service in life better than a summer or two under a good farmer on an Ontario farm? Why might this experience not be counted a part of the requirement for matriculation or for a teacher's certificate? Why shouldn't the schools interest themselves, practically and theoretically in the common work of the farms? There is nothing done in a school laboratory so full of educating

value as farm work. We have been slow to see the culture value of work. Our bookishness has clouded our visions.

The girls who went out from our Colleges as "farmerettes" and gave what was called "National Service" on fruit and truck farms, acquired sympathies, skill and knowledge, to say nothing of healthful exercise, quite as valuable and quite as educative as any course that they might have had inflicted on them in higher mathematics. Why should not the Colleges recognize this new field of culture, and, if necessary, adopt and direct it? The Colleges might profitably enlarge their notions of what is included within the scope of a liberal education.



Section of Grounds and Roadway, Ennisclore.

There is a place for a Department of Agriculture and Horticulture in the University of Toronto.

Recognizing these things, the Ontario Horticultural Association might very well adopt amongst its resolutions, one covering this matter, while Horticultural Societies all over the Province might urge upon local school authorities the introduction of Horticulture and Agriculture into the High Schools, Continuation Schools and Collegiate Institutes of the Province. Can you imagine anything that our boys and girls may get from their high schooling that will enrich their own lives and make their lives richer for others than a fondness for and a practical knowledge of gardening.

Here is a rich field for Horticultural Societies to cultivate!

HORTICULTURE IN THE NATURE STUDY COURSE FOR ONTARIO SCHOOLS.

Form I.

Garden plots.

The study of plants from the garden and the fields.

Care of potted and garden plants.

Form II.

Shrubbery and orchard trees.

Experiments in the germination of seeds.

Weeds and wild flowers.

Care of potted and garden plants.

Form III.

Garden work and studies in experimental plots in relation to the home and farm work.

The study of common plants, trees, and fruits continued.

The study of weeds and their eradication.

Soil studies and experiments.

Form IV.

Ornamental and experimental garden plots.

Study of economic plants.

Relation of soils and soil tillage to farm crops.

THE CHAIRMAN: I think Mr. McCready has proved that if we as citizens of Ontario want Horticulture taught in the schools we can have it taught by making our wishes known to the Boards of Education, and that the Board of Education can have it taught by duly qualified teachers.

REV. A. H. SCOTT: The Ontario Horticultural Association has been endeavoring to get in closer touch for a number of years with the Department of Education. What I would like to know, for the benefit of this Convention, is whether or not the Department of Education at the present time is opening the way for any additions to our text books or for preparation of any new text books for our schools in order that we may get into the books of our schools some such subject as he is bringing to our attention to-day.

S. B. MCCREADY: I am not intimately acquainted with their policy, but I know that this is part of it—not to have a text book on agricultural work for the schools. Instead of that to have a manual which directs teachers in the teaching of it, and it is hoped that through this practical work, the teachers will have something very much better than a text book. I agree that there is a place for little bulletins or circulars to schools to arouse interest, but I do not know whether they have any such plans.

E. E. C. KILMER: The Department of Education has under advisement a new set of readers and it is open for anyone to suggest any matter they saw fit, to be incorporated in those readers, up until the first of June, the Department using their discretion whether it was to be incorporated or not.

RESOLUTIONS.

The Resolutions Committee then reported as follows:

Moved by MR. EVANS, seconded by MR. W. T. LAWRENCE, "That this Association recommend to the Hon. the Minister of Agriculture that legislation be enacted to provide for the removal and prohibition of signs or billboards in rural localities." Carried.

Moved by W. J. EVANS, seconded by V. A. SINCLAIR, "That this Association recommend to the Hon. the Minister of Agriculture, that the Ontario Horticultural Societies Act be amended where necessary to provide that the fiscal year of Horticultural Societies be the calendar year; and also that the Annual Meeting of said Societies be held not later than the 15th of January."

There was some little discussion on this last resolution, one member contending that it should be referred back to the Committee. Mr. Evans stated as his reason for supporting this measure that it was easier to impress upon members in this way up to what time their fees were paid, as if they joined in July and August, they seemed to find it difficult to identify the date to which they were paid up as being the end of the present year only.

Mr. Hartry, of Seaforth, contended that having the Convention in the fall when the Flower and Fruit Show was on, stimulated interest.

Dr. Bennett stated that while he agreed with Mr. Evans and supported the resolution in Committee, he did feel that perhaps it did not give the opportunity of procuring seeds and so on when the Annual Meeting was not held until January.

Mr. Evans said this might be done even if the fiscal year ended at the end of the calendar year.

Mr. Robinson, Hamilton, thought from a business standpoint it was a good move.

Mr. Lawrence, of London, expressed himself as being favorable to the change, stating in answer to Dr. Bennett's argument that the purchasing of premiums was in a circle at any rate, and you could not end a circle at any time. The resolution carried.

Moved by F. E. BENNETT, seconded by W. T. LAWRENCE, "That particularly in the interests of greater production and horticulture in general, this Convention representing nearly 20,000 horticulturists in the Province of Ontario wish to record its approval of the Daylight Saving Act as at present in force in Canada and that copies of this resolution be sent to the proper authorities at Ottawa." Carried.

Moved by W. T. LAWRENCE, seconded by F. E. BENNETT, "That this Association recommend to the Hon. the Minister of Agriculture that the Ontario Horticultural Societies Act be amended to provide for the election of ten Directors instead of nine, five to be elected for two years and five for one year, and thereafter five for two years annually.

W. T. LAWRENCE: The same condition, from what I can find out, pertains to almost every Horticultural Society in Ontario. We have four or five at the most on the directorate who are workers and there are a bunch of drones, who are elected because the Annual Meetings are not well attended and the last four or five are very often elected because there is no one else there. By electing five annually, the chance is that you will get five much better men than if you attempt to elect nine or ten at any one meeting. Then, too, there is continually someone who is acquainted with the work that has been carried on in previous years, and in that way much better results can be achieved, especially in the larger centres.

A TORONTO MEMBER: We in Toronto have overcome that difficulty by having a Nominating Committee. We take the Chairman of each of our Committees, and they select from the membership names that they think will be desirable members, and that is printed and submitted at our Annual Meeting, when members have the opportunity of adding any other names they may wish. Those ballots are passed around and marked, which enables our people to accept nominations. And we find that has been a very satisfactory method.

W. T. LAWRENCE: We have found that men who were not able to attend the Annual Meeting through sickness, even though some of the very finest horticulturists, were left off the Board because they were not there, and men were put on who were there, although not so useful. Resolution carried.

The Committee have carefully considered the clause in the Superintendent of Horticultural Societies' Report that the Minister of Agriculture be requested to consider the amendment of the Act to provide for grants to Horticultural Societies in cities of more than 400,000 in population.

Your Committee recommend that Clause 2 of Section 6 of the present Act be repealed and that the recommendation of the Superintendent be substituted therefor with the exception that where he recommends provision be made for four Societies the word three be substituted.

REVISION OF THE CONSTITUTION.

C. A. HESSON: As your Treasurer for some years back I have had a little experience in connection with fees, and I have mentioned it at previous meetings. There is a difficulty in the minds of the local Societies in regard to this question of fee—not only as to when it is payable but what it is based upon. The Constitution was amended some years ago. I think in 1911 or 1912, and it called for a fee being based upon the Societies reporting. What constitutes reporting. A Society reports in 1917 a certain membership. That membership is printed in the Annual Report. The end of 1918 comes along and we are asking for the payment of these affiliation fees and the local Society says, "We have not got so many members this year, and they send along their fee, not in accord with the 1917, but the 1918 membership. That doubt should be done away with in revising this Constitution. So I would suggest that the word "reporting" be elaborated upon and definitely fixed as the "last reporting to the Department."

It was moved that the clause read "said membership fee to be determined by the official figures of the Department of Agriculture as shown in the last printed report."

The clause of the revised draft was then adopted, except that the phrase, "up to 500 members the maximum fee to be \$5.00" was struck out, and the addition made as above that the fee be determined by the last printed report of the Department. Carried.

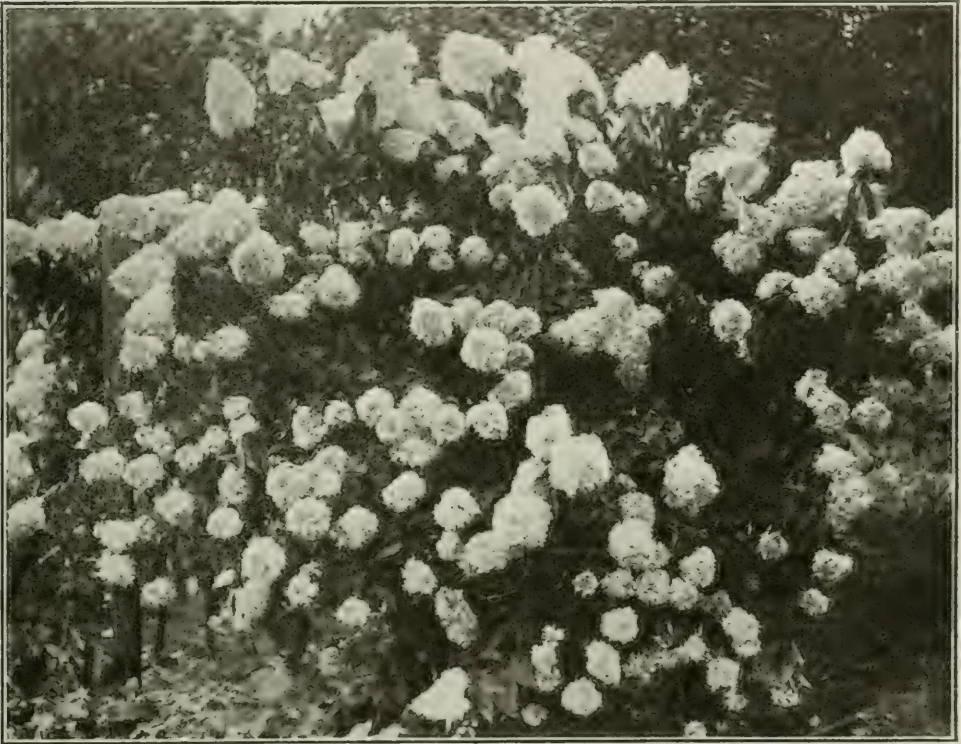
Under No. 2, Mr. Evans stated: I would like to see the clause as it originally stood, and that is that the Annual Meeting be held in Toronto. Toronto is a good railway centre. If we go to another place it is going to be somewhat difficult for the eastern delegates to go to a place west of Toronto, and just as difficult for delegates from the west to go to a place east. I move that Toronto be inserted.

Dr. F. E. BENNETT: Toronto is the only place where the Convention can be held satisfactorily, and if it is left over there will be discussions and probably

a little hard feeling. But I do not believe you could embody that in the Constitution.

J. A. WEBBER: Hamilton sent you a special invitation this year, and the Board of Trade of Hamilton were ready to receive you with open arms, but we were convinced afterwards that Toronto was the place to hold the Convention, being in touch with the Government and its officials.

J. LOCKIE WILSON: If that is your wish, we will revise this to read, "The annual Convention shall be held at the City of Toronto at such time as may be decided upon by the Executive." Clause 2 was carried with these changes.



Hydrangea Paniculata Grandiflora.

Under No. 6 there was some considerable discussion, Mr. Evans contending that only delegates should be eligible for office and that stipulation should be so made.

Opinion on this question seemed divided. Mr. Wilson asked the meeting if a member of a local Horticultural Society could not be elected who was not a delegate to the Convention. Mr. Evans said "No, it would not be reasonable for the Association to elect, say, Mr. Thos. Church as Vice-President of the Association when he took absolutely no interest in Horticulture although he is a member of the Toronto Society.

A MEMBER: So long as a man was a good active worker in the Horticultural Association and also a member of the local Society, he should have the right to be elected.

J. LOCKIE WILSON: Suppose that some untoward event occurred, say a storm, and you had no representative from a certain district. Would you prevent them having representation? You had better trust this to the Convention.

Mr. Evans' motion was then seconded by another member, but was lost, and the original clause as incorporated under No. 6 was carried. The other clauses were adopted as read.

In lieu of Clause 6, another had been prepared by the Constitution Committee providing for a Nominating Committee to bring before the house the nominees for office for each ensuing year but this motion was lost.

Districts as arranged were then decided upon.

The Constitution as amended was then adopted in full as follows:

CONSTITUTION OF THE ONTARIO HORTICULTURAL ASSOCIATION.

1. This Association shall be known as the Ontario Horticultural Association, and any Horticultural Society in Ontario shall be eligible for membership upon the payment of the following fees per annum: Societies with a membership of 200 or less, \$2; for each additional one hundred of membership, \$1 extra, up to 500 members, the maximum fee to be \$5; said membership fee to be determined by the official figures of the Department of Agriculture as shown in the last printed report.

2. The primary objects of this Association shall be to advance the interests, promote the welfare, increase the usefulness and supplement the efforts of all Horticultural Societies in the Province. An annual Convention shall be held at Toronto at such time as the Executive may decide, and to this meeting each Horticultural Society in the Province shall be invited, one month in advance of such meeting, to send delegates for the purpose of discussing matters of general interest, methods of management, special features of Society work, lectures and reports for educational circulation, and for making such recommendations to the Honourable the Minister of Agriculture for Ontario as may be deemed best in the interests of all Societies. Each Society shall be entitled to be represented by two delegates, and any Society having a membership exceeding 100 shall be entitled to additional representation in the proportion of one delegate to each 100, or fraction of 100 members over the first one hundred.

3. The officers of the Association shall consist of a President, First and Second Vice-Presidents, a Secretary and Treasurer, nine Directors and two Auditors. The Board of Directors shall appoint from among themselves an Executive Committee, to consist of the President, the Secretary, and not more than three Directors, and of this Committee three shall form a quorum.

4. The President, the two Vice-Presidents, the Secretary and Treasurer and the Directors shall constitute the Board.

5. The President, or, in his absence, one of the Vice-Presidents, shall preside at the meetings of the Association, and of the Board of Directors. In the absence of both the Vice-Presidents, the members may appoint their own Chairman.

6. The officers shall be elected by nomination and by ballot at the Annual Meeting, for one year, and shall hold office until their successors are elected.

7. Vacancies in office shall be filled by the Executive Committee.

8. The Board of Directors of the Association shall have power to call a special meeting of the Association, whenever they deem it advisable. Notice of all special

meetings, with a statement of the subjects to be discussed, shall be sent to all Societies, at least one month previous to the date of said meetings, and such subjects only shall be passed upon.

9. At the Annual Meeting or any special meeting of the Association, twelve members or delegates shall constitute a quorum for the transaction of business.

10. The Board of Directors, between the sessions of the Association, shall manage its affairs, and report its transactions to the Annual Meeting, and five members of such Board shall constitute a quorum for the transaction of business.

11. The constitution and by-laws may be amended, revised or repealed by a majority of the members present at any regular annual meeting, provided a notice of motion of such proposed amendment has been given at the previous Annual Meeting. All notices of motion not given at the Annual Meeting shall be forwarded to the Secretary not later than one month before the date of the Annual Meeting.

12. The Executive shall prepare a programme or order of business previous to calling the Annual Meeting, and a copy of such programme shall be sent to each Society at the time notice is given of such meeting.

13. The order of business of the Annual Meeting shall be as follows: Adopting report of the previous meeting, receiving reports of Committees, reading communications and appointing Committees, unfinished business, new business, Treasurer's statement, and the nomination and election of officers.

DISTRICTS.

1. Carleton, Dundas, Glengarry, Grenville, Lanark, Leeds, Prescott, Renfrew, Russell, Stormont.

2. Durham, Frontenac, Haliburton, Hastings, Lennox and Addington, Northumberland, Peterborough, Prince Edward, Victoria.

3. Algoma, Dufferin, Kenora, Manitoulin, Muskoka, Nipissing, Parry Sound, Rainy River, Simcoe, Sudbury, Temiskaming.

4. Ontario, Peel, York.

5. Haldimand, Halton, Lincoln, Norfolk, Welland, Wentworth.

6. Bruce, Grey, Huron.

7. Brant, Waterloo, Wellington.

8. Elgin, Middlesex, Oxford, Perth.

9. Essex, Kent, Lambton.

REPORTS OF DISTRICTS.

District No. 1, Rev. Dr. Scott, Director.

If these fair counties in the eastern portion of Ontario were cultivated horticulturally as they should be, and as I hope they will be, you will require two or three Directors instead of one. Immediately after the last Convention I set myself to personally visit every Society in District No. 1, and with the exception of one of the Societies I have been successful in carrying out my purpose, and the first thing I desire to say to the members of this Convention is this: that there is a field in that portion of Ontario that lies between the two great rivers of our country—the Ottawa on the north and the St. Lawrence on the south—that gives great promise for the future furtherance of the interests that we have

at heart as Canadian horticulturists. You have down there as intelligent and as purposeful a band of men and women in the horticultural line that I know anywhere on either side of the Atlantic.

Here is an old historic district of Canada, a rich and promising portion of the Province of Ontario, and if we can in a little while double the numbers of our Societies and double or treble the membership in each Society, you will have a district far more influential than it is to-day. I am looking forward to the time when under somebody's supervision there will be a Horticultural Society in Pembroke, Arnprior, Almonte, Cornwall, Alexandria and other places in District 1.

To speak a word about the Societies that exist at the present time, there is a Society in District No. 1 that is setting an example to Canada and to every person in this great work, and that is the city that is the political metropolis of our country, Ottawa, and when I speak of them I speak regretfully of the vacant place that has been created by the death of our friend, R. B. Whyte. But there are other men there who are doing a great thing for our country and who are setting an example to the whole district in these discussions in which we are interested this morning. The smaller Societies are doing very well, and they desire to do better. My own Society of Perth is one of the oldest in Canada, and it would not be becoming on my part just now to speak of their particular excellence, but all in all, Horticulture is looking up, and we are moving forward and we hope to do better things in the days to come than we are doing just now.

District No. 2, G. H. M. Baker, Lindsay, Director.

I have been Director of your Association but one year and I am glad to say that we have formed a new Horticultural Society at Fenelon Falls. If I am re-elected by the Convention my endeavour will be to assist in organizing two or three new Societies in our district next year. But we must not forget that the important part of our work is to get everybody interested in it. We want to do like St. Thomas—get the Town Council, the Board of Education, the Board of Trade, the Women's Institutes, and all organizations interested and backing up the Horticultural Societies throughout the district and then we will not have as much trouble in securing the number of Societies we should have.

District No. 3, R. Whorley, Haileybury, Director.

I am sorry that Rainy River and all of these districts are 100 miles away from me. The only thing I can do is to write to the Presidents of the different Societies.

District No. 4, Miss Mary Yates, Port Credit, Director.

There are 13 Societies to date in this district which includes the counties of Peel, York and Ontario. I visited many of the branches in the capacity, either of advisor, speaker on a definite subject or as judge of vegetables and decorative classes. Letters to each Secretary were written from time to time in order to obtain the general opinion of the district and to submit lines for action.

A questionnaire was submitted to all branches as to their views on certain lines in order to report to the Board of Directors for the Association. The results of this and of informal talks at Exhibition and elsewhere decided us to call a meeting in the near future to consider a competition amongst the 13 Societies with the object of unifying the work of the District to some extent. One direct result has been the

catering for the 1919 Convention by District No. 4 as a unit under the capable leadership of the Thornhill branch.

Outstanding features have been the monster Vegetable Show for which the Toronto Society was responsible, assisted by the Organization of Resources Committee. The President of the Toronto Horticultural Society, Mr. Frank Roden, was Chairman. The director for District No. 4 was appointed as one of Mr. George Baldwin's five judges. Ten thousand persons attended this show which was the largest vegetable show ever held in Canada.

The use of the handsome new school buildings for the Horticultural Show in Port Credit were secured under the auspices of Mr. Maybee who acted as both Chairman of the School Board and President of the Horticultural Society and did much to secure admirable co-operation between the two groups. A plan of the school grounds was made and the Horticultural Society looks forward to planting them. Weston may be said to have held the best organized small town show visited during the year. Features were developed during the two days that made it an Exhibition of very great interest.

District No. 6, John Grieves, Seaforth, Director.

Mr. Grieves was not present but another delegate reported that the work was progressing nicely, that the Seaforth Society had turned down the usual work of producing flowers for that of Greater Production. They were extremely active in their Society last year, there being scarcely a foot of ground within the corporation uncultivated.

District No. 7, H. W. Brown, Kitchener, Director.

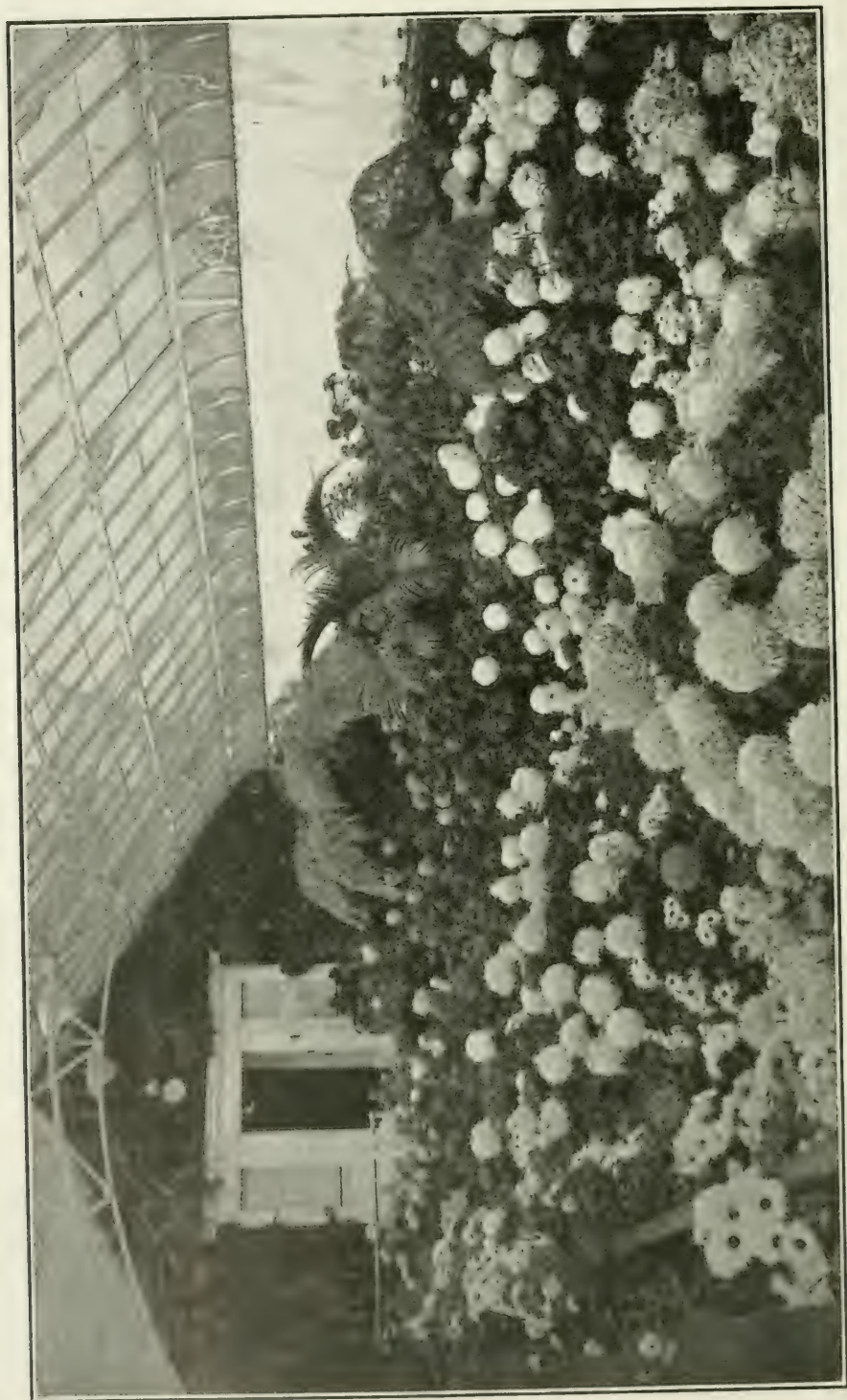
District No. 7 includes the counties of Brant, Waterloo and Wellington. There are fourteen horticultural societies in this district. I have written to each society at least twice offering my services, especially during the summer months and urging intensive gardening during war time and advising application to the President or the Superintendent for speakers for meetings. Very few societies failed to respond.

I forwarded copies of the premium and the prize lists of the Kitchener society to all societies which responded, and invited a return of the compliment.

At the request of the Elora Society I assisted in the judging of the lawns and gardens, and school gardens in July, and in judging at their annual exhibition late in August. I visited the exhibitions, also, at Waterloo, Elmira and New Hamburg as well as our own at Kitchener and the one at Galt (by proxy) and all were splendid, each one indicating that the call for greater production had been heeded.

I am pleased to report the organization of a new and promising society, New Hamburg. I assisted the Society to accomplish this about one year ago, too late to share in the 1918 grant, but not too late to do a lot of effective work for last year and in preparation for this year. Mr. Enoch Eby, the principal of the public school was the first president, and Mr. W. H. Umbach, the first secretary.

There are several aggressive and enterprising societies in this district, some of which I have been unable to visit. Guelph has given evidence of a broad gauge policy and has been laying the foundation for big results and a large membership. Waterloo has revived her annual exhibition. Galt and Brantford have a good membership and fulfil their mission generally. Kitchener Society fosters especially home gardens, beautiful premises, children's home gardens, a liberal distribution of premiums, and an exhibition which has taken the place, since its inception, of



Chrysanthemums at Ardwood.

a fall fair. Paris has a comparatively large membership and Elora and Elmira are doing good work and have done it long before other societies were organized.

I have had every assistance from the Department and from President Dockray. The president was enthusiastic and resourceful, and must have been a great encouragement to his directors and the societies which could be touched. I have tried to do what I could. I would have been glad to assist other societies in my district had it been necessary for me to do so. It is very difficult for me to attend meetings during the year and unfortunately the most important meeting of the Executive of the Ontario Association was called for one of the days of the Kitchener annual exhibition.

District No. 8; Dr. Bothwell, Stratford.

Being anxious for greater production, I was during the past year in constant touch with the Societies in my district, especially the smaller ones, urging greater production. I was fortunate in having in my district Dr. Bennett of St. Thomas. I wrote asking him for some assistance in the work and he very kindly agreed to do what he could do to help out, as owing to conditions over which I had no control I could not take up the work as enthusiastically as I would have wished.

District No. 9, C. D. Brown, Walkerville.

Two outstanding features in connection with my work in reference to the Societies in our District were Greater Production and some effort on my part to establish new Societies in towns which had not already become affiliated. The first of my objects, of Greater Production, met with some very considerable success. Our efforts with the Societies in which I am in closer touch were more successful than with the farther outlying districts. We increased production through the efforts of the school children and found the work very successful. In addition to that one of our Societies offered very attractive cash prizes for a garden competition. There was a great deal of enthusiasm shown by the children who undertook to compete and we had some excellent prizes. I understand the judges who made the tour of inspection reported it very interesting and they told of the wonderful work and the interest of these different people in the efforts for greater production.

The other object of the office to which I have been elected was that I encouraged some of these other towns which had no Societies to organize. For this purpose I drew up a schedule or a list of the different objects of the Societies and the work they should undertake and sent out a copy of this to every town in the two counties with a population of over 200. This communication was addressed to the Postmaster. I asked him to hand this to some person in this town he thought was interested in Greater Production and Horticulture. One farmer had sold \$6,000 worth of tobacco which he had grown in one year, and also the boys in the schools were earning such large money at munition making that it was hard to get them at gardening. My own boy, 15 years of age in two weeks of his summer vacation brought in a pay envelope of over \$70.

The election of Officers resulted as on page 6.

POTATO GROWING IN A SMALL GARDEN.

DR. C. A. ZAVITZ, AGRICULTURAL COLLEGE, GUELPH.

Potatoes are probably the most generally grown of the crops in Ontario. They form an important part in the crops of the farmer, the market-gardener, or the

town or city man with his small home garden. Potatoes are grown with comparative ease, and yet their cultivation can be decidedly and economically improved.

We have conducted a large amount of experimental work with potatoes at the Ontario Agricultural College within the past twenty-five years. It is the intention, to present at this time in a very brief form some of the conclusions of the various experiments conducted at Guelph and throughout Ontario in the past years.

SOILS.

Potatoes can be grown satisfactorily on almost any fertile and friable soil which is either naturally or artificially well under-drained. Good soils, whether loams, sandy loams, or friable clay loams might be mentioned as particularly well suited for the potato crop. Sandy loams are especially favorable for the production of potatoes for early use. On light sands, heavy clays, and black muck soils the growing of potatoes is usually more difficult, although good results are sometimes obtained from even these soils. The most of the soils of Ontario are well adapted to potato production providing they are properly underdrained either naturally or artificially.

CULTIVATION.

The cultivation of the soil for potatoes should be deep and thorough. The land may be plowed either in the fall or in the spring. If it is a heavy clay, it is usually wise to have deep fall plowing. An excellent plan is to place the land in ridges in the autumn, leaving the ridges about thirty inches apart. This protects the available fertilizing material in the ridges and allows the winter frosts to act on the sub-soil in the bottom of the furrows. In the spring the land is then in excellent condition for early and thorough cultivation. In some of the small gardens, however, this method might prove impracticable. One of the important factors is to have the land thoroughly spaded or plowed in the spring, so as to have a deep, well pulverized seedbed.

FERTILIZATION.

When there is no danger of a large amount of scab, farmyard manure is one of the best sources of fertility as it not only supplies plant food but it keeps the land in an excellent condition mechanically. Farmyard manure at the rate of twenty or twenty-five tons per acre usually gives satisfactory results. It is best to apply the manure in the autumn when this can be accomplished. If applied in the spring it should be thoroughly well rotted.

Commercial fertilizers can often be used in small gardens to excellent advantage. A good home-made fertilizer is one in the proportion of seven pounds Nitrate of Soda, sixteen pounds Acid Phosphate and nine pounds of Sulphate of Potash. This fertilizer we have found has given economical results with the potato crop throughout Ontario whether applied at the rate of 320, 640 or 960 pounds per acre. There are special brands of fertilizers for potatoes which give very good and satisfactory results, as for instance the "Potato Fertilizer" manufactured in Hamilton. This fertilizer when applied at the rate of 320, 640 and 960 pounds per acre has also given satisfactory results throughout the Province in connection with the Co-operative Experiments.

VARIETIES.

For commercial purposes emphasis is placed at the present time on the concentration to one early and to one late variety of potatoes. The two varieties selected are the Irish Cobbler of the early and the Green Mountain of the late sorts.

For home use, it is not so important for the different growers to produce only one variety with the idea of securing uniformity in large lots. Extensive experiments have been conducted at Guelph in testing some four hundred varieties for both production and for table quality. As a late potato the Empire State has given excellent results. It is a large yielder, has comparatively few small tubers, and the potatoes are of excellent quality, when flavor, mealiness and general appearance of the cooked potatoes are taken into consideration.

For very early use the Early Ohio fills an important place. Therefore, for the small garden it is rather difficult at the present time to choose varieties which are much superior to the Irish Cobbler, the Early Ohio, the Green Mountain and the Empire State.

In 1918, 138 separate tests were successfully conducted throughout Ontario in comparing the Irish Cobbler and the Green Mountain varieties of potatoes. In order to make the experiment as reliable as possible seed of each of these varieties was obtained from Southern Ontario, Northern Ontario and New Brunswick. In the average results of the 138 successfully conducted experiments it is found that the Irish Cobbler gave 134 and the Green Mountain 129 bushels per acre. The results from the gardens of these two varieties would likely be somewhat higher than those obtained from potatoes grown in the fields.

SOURCES OF SEED.

It has been found that the best results from growing potatoes in any one locality is usually from seed potatoes brought from the North in comparison with potatoes grown locally. In experiments conducted at Guelph over a series of years it has been found that the average returns in bushels per acre from seed potatoes obtained in Southern Ontario was 167 bushels, from Muskoka 301 bushels and from two sections in New Brunswick 202 and 237 respectively. In the last two years potatoes have been obtained from Thunder Bay District and have given excellent results both at the Agricultural College, Guelph, and at the Central experimental Farm, Ottawa.

USE OF IMMATURE SEED.

When in Scotland a few years ago, I visited one of the greatest potato growers in Ayrshire and found that he was growing early potatoes for market and planting a second crop on the same land after the first crop had been removed. The second crop of potatoes were only about half grown and therefore, were very immature at the time of frost and digging in the autumn. These immature potatoes, however, were used for planting in the following spring. This method seemed to be used quite extensively. Since then, experiments have been conducted at the Ontario Agricultural College by planting potatoes at different dates in order to secure seed of different stages of maturity for planting the following year. The average results of the experiments over a series of years show that those potatoes which were most immature produced the highest yield per acre, and that the yield gradually decreased as the stage of maturity of the seed potatoes increased.

CUTTING SEED POTATOES.

Extensive experimental work under ordinary conditions has shown that it is a good plan to use good-sized seed potatoes and to cut them in pieces of from one to two ounces in weight, and having two, three or four eyes in each piece. It is an excellent plan to throw the freshly cut pieces in finely ground land plaster or

gypsum and to plant the sets immediately after cutting. The best returns have been obtained by planting in rows about twenty-eight inches apart and leaving sets singly from twelve to fifteen inches apart in the rows. In the average of ten years' experiments about four bushels per acre increase has been obtained from hilling the potatoes in comparison with level cultivation.

PRODUCTION OF EARLY POTATOES.

In order to hasten the growth, numerous experiments have been conducted by placing whole potatoes of about two or three ounces each under different exposures for a period of three weeks before planting. As the result of these experiments, it has been found that the greatest satisfaction has been given from exposing the potatoes in a comparatively warm room with a moderate light for about three weeks before planting. This method increases the yield and hastens the early crop of potatoes.

CARE OF THE GROWING POTATOES.

As the results of experimental work it was ascertained that potatoes which were carefully sprayed with Bordeaux Mixture were not only freer from the rot caused by the late blight in unfavorable seasons, but also that the spraying increased the yield somewhat, even when there was no rot present. Three sprayings both on top and underneath the leaves gave better results than five sprayings on top of the leaves only.

In order to prevent the ravages of the potato beetle or potato bug, the insects can best be hand-picked in the small patch of potatoes. If this is not practicable, however, a solution of one-half pound of Paris Green, two pounds of Arsenate of Lead with forty gallons of water is usually effectual in keeping the plants comparatively free from the damages of the potato bugs.

CARE OF POTATOES.

In digging the potatoes, care should be taken to expose tubers to the sun as little as possible. They should be kept in a cool, dry place in the autumn. When stored in the cellar potatoes keep in an excellent condition if the temperature is fairly constant and around thirty-five degrees above zero. It is important to keep potatoes firm during the winter and free from sprouting in the dark in the spring before planting.

JAS. E. BROWN: All the experiments are not conducted at Guelph, although we are indebted to that Institution for a great deal of our success in gardening. In the Spring I purchased one bushel of Irish Cobbler potatoes from an Eastern firm. Out of this bushel there were some bad ones, and some small ones, so that there were only 56 lbs. of good potatoes to start with. These were cut into sets, having one eye in each piece, except in the case of some very small potatoes, which were used whole.

They were put into a bed the first week in April, high up from the ground, exposed to the sun, and very lightly covered and were allowed to sprout for five weeks, at which time the potatoes were about four inches high and had a good root.

The ground in the lot was then plowed and harrowed, and the furrows plowed—not too deep—seven feet apart. After plowing, the ground was allowed to dry out before the plants were put in.

The plants were then taken up and set in these furrows, set every twelve inches apart. They were covered over lightly, leaving the tops of the potatoes out to the

sun and air. They were hoed in a week from that time, and some more covering put on the plants. A week later they were hoed again, and some more dirt thrown over the plants making the ground level. Shortly afterwards the seven feet of ground between the rows was thoroughly cultivated. This was done twice, about two weeks apart. By this way the ground was very clean. The potatoes grew



The National Flower of England.

so rapidly with very strong tops and with the exception of a few times picking the bugs from the vines which came from the sets having two or three eyes, these being weaker there was no spray used on them.

On the 26th of May I planted Stowe's Evergreen Sweet Corn between the rows. The potatoes made very rapid growth, and the vines grew from three to three and a half feet high. The row measured about four feet across the top. The corn was slow in coming and did not prevent plenty of air reaching the potatoes.

On September 2nd I dug my potatoes, and from the original fifty-six pounds
6 H.S.

of seed, there were 846 lbs., or fourteen bushels, and the potatoes were all large, averaging 150 potatoes to sixty pounds.

Under each set there were from two to five large potatoes, and few small ones. There was only one bushel of small and medium potatoes out of the fourteen bushels, and the large potatoes were from the sets with one eye, the smaller ones coming from the sets with two or three eyes.

The potato vines falling down as the potatoes ripened, gave plenty of air and room for the corn, and I also had an excellent crop of sweet corn.

It is wonderful what a little patch of ground will produce if scientific methods are employed, and the proper care taken, even by amateurs.

REPORT OF THE COMMITTEE ON NAMES AND VARIETIES.

H. J. MOORE, NIAGARA FALLS.

This is an attempt to standardize things, score cards, a list of annuals and perennials, so that following along these lines and accepting this standardized list of plants we will be able to give the word horticulture a greater dignity, you will be able to beautify your gardens as you have never been able to do in the past. But in order to do that we must have your sympathy, the help of every person in this Organization, and with that sympathy and help, in a few years your Committee will be able to show you something worth while.

The report of the Committee on Names and Varieties this year consists of two contributions, one giving a complete list of "Annual and other Flowers, including Greenhouse, Tender, and Half-hardy Perennials, which in Canada cannot be classed as Hardy Perennials," which list is prepared as a guide to their hardiness, common names and the correct pronunciation of their botanical names. The other consists of score cards on Bulbs, Pæonies, Roses and Sweet Peas, together with notes compiled to make clear the terms which appear on the cards.

The Committee has not been able to meet together for consultation this year and the Secretary has had to depend on correspondence for the suggestions and help received from other members of the Committee.

H. J. MOORE, *Chairman*
F. E. BUCK, *Secretary*.

A COMPLETE LIST OF ANNUAL AND OTHER FLOWERS, INCLUDING GREENHOUSE, TENDER AND HALF-HARDY PERENNIALS WHICH, IN CANADA, CANNOT BE CLASSED AS HARDY PERENNIALS.

Prepared as a guide to their hardiness, common names, and the pronunciation of their botanical names by the Committee on Names and Varieties of the Ontario Horticultural Association.

NOTES AND EXPLANATIONS.

An asterisk preceding the name of a plant signifies that as a rule it is, correctly speaking, a perennial, but having tender roots which require greenhouse or indoor conditions it cannot be grown in the open in Canada, except as an annual.

The signs H., H.H. and T. refer to the hardiness of annuals, or those plants which are generally grown outside as annuals, H. signifying that they stand considerable frost and T. that the first frost kills them. Those marked H.H. withstand varying degrees of frost before succumbing. At the Central Experimental Farm, Ottawa, 98 per cent. of these flowers have been tested as *annual*. In a few places in Canada such flowers as snapdragons, pansies, etc., can be wintered successfully, but even then it is more satisfactory to treat them as annuals. Most of those with the designation G. are grown as greenhouse annuals, but when grown under garden conditions they are also entitled to be classed with true annuals.

A few of the plants which are tender to early frost at Ottawa are considered H.H. at Niagara Falls or Toronto. For example, *Amaranthus*, *Balsam*, *Celosia*, *Eutoca*, *Salvia* and *Zinnia*.

The common or English name is given for all the better known annuals. In such cases as dahlia, geranium, petunia, etc., where the botanical name is well known, the committee recommends that it be used as the common name.

The correct pronunciation of all the Latin names is given. In some cases another pronunciation is frequently heard. It is advised, however, that, as far as possible, the following should be accepted as the correct pronunciation.

In about a dozen cases certain flowers are better known in their perennial than in their annual forms.

The Committee recommends the adoption of this list as the basis for Canadian authority on these points.

*The sign ' following a syllable signifies that it is the accented syllable of the word. The sign — signifies that the vowel is long.

<i>Botanical Name.</i>	<i>English Name.</i>	<i>Correct Pronunciation.</i>
<i>Atriplex</i> , H.H.	Red Mountain Spinach.	a'-tri-plex.
* <i>Antirrhinum</i> , H.	Snapdragon.	an-tir-rhí'-num.
<i>Ammobium</i> , H.H.	White Everlasting.	am-mō'-bi-um.
<i>Abronia</i> , H.H.	Sand Verbena.	ab-rō'-ni-a.
<i>Acroclinium</i> , H.H.	Daisy Everlasting.	ak-rō'-klin'-i-um.
<i>Agrostemma</i> (<i>Lychnis</i>) H.	Rose of Heaven.	ag-ro-stem'-ma.
<i>Alonsoa</i> , H.H.	Mask Flower.	al-on-sō'-a.
<i>Alyssum</i> , H.H.	Sweet Alyssum.	al-is'-sum.
<i>Amaranthus caudatus</i> , T.	Love-lies-Bleeding.	am-ar-anth'-us.
<i>Amaranthus tricolor</i> , H.H.	Joseph's Coat.	
<i>Anagallis</i> , H.H.	Pimpernel.	an-a-gal'-is.
<i>Arctotis</i> , H.H.	African Daisy.	ark-tō'-tis.
<i>Argemone</i> , H.H.	Prickly Poppy.	ar-gem'-ō-nē.
<i>Arnebia</i> , H.H.	Prophet Flower.	ar-nē'-bi-a.
<i>Asperula</i> , H.H.	Woodruff.	as-per'-u-la.
<i>Agathaea</i> , G.	Blue Marguerite.	ag-a-thē'-a.
<i>Adonis</i> , H.H.	Pheasant's Eye.	a-dō'-nis.
<i>Ageratum</i> , T.	Floss Flower.	adj-er-ā'-tum.
* <i>Achimenes</i> , G.		a-ki-mē'-nēz.
<i>Amberbia</i> , H.H.		am-ber'-bi-a.
<i>Anchusa</i> , H.H.	Cape Forget-me-not.	an-kū'-za.
<i>Angelonia</i> , G.		an-gel-ō'-ni-a.
<i>Adlumia</i> , H.H.	Allegheny Vine.	ad-lū'-mi-a.
<i>Bartonia</i> , H.H.	Barton's Golden Flower.	bar-tō'-ni-a.
<i>Brachycome</i> , H.H.	Swan River Daisy.	brak-i-kō'-me.
<i>Browallia</i> , G.	Amethyst Plant.	brow-āl'-li-a.
<i>Balsam</i> , T.	Balsam.	bal'-sam.
* <i>Begonia</i> , G.	Begonia.	be-gō'-ni-a.
* <i>Bellis</i> , H.	Daisy.	bel'-lis.
<i>Bryonia</i> , H.H.	Bryony Vine.	bri-ō'-ni-a.
<i>Cacalia</i> , T.	Tassel Flower.	ka-kā'-li-a.
<i>Calandrinia</i> , H.H.	Rock Purslane.	kal-an-drin'-i-a.
<i>Calceolaria</i> , G.		kal-sē-o-lar'-i-a.

<i>Botanical Name.</i>	<i>English Name.</i>	<i>Correct Pronunciation.</i>
<i>Calendula</i> , H.	Pot Marigold.	kal-end'-u-la.
<i>Cannabis</i> , H.H.	Chinese Giant Hemp.	kan'-na-bis.
<i>Cardiospermum</i> , T.	Balloon Vine.	kar-di-o-sperm'-um.
<i>Celosia</i> , T.	Cockscomb.	sē-lō'-si-a.
<i>Cineraria</i> , G.	Cineraria.	sin-er-ar'-i-a.
<i>Cineraria</i> (<i>Senecio</i>), H.H.	Dusty Miller.	
<i>Collinsia</i> , H.H.	Collin's Flower.	kol-lin'-si-a.
<i>Cosmos</i> , H.H.	Mexican Aster.	koz-mos.
<i>Calliopsis</i> , H.H.	Calliopsis.	kal-le-op'-sis.
<i>Callirhoe</i> , H.H.	Poppy Mallow.	kal-li-rhō'-e.
<i>Callistephus</i> , H.H.	China Aster.	kal-li-steph-us.
<i>Celsia</i> , G.	Celsia.	sel'-si-a.
<i>Collomia</i> , H.H.		kol-lō'-mi-a.
<i>Convolvulus</i> , T.	Morning Glory.	kon-vol'-vū-lus.
<i>Coreopsis</i> , H.H.	Coreopsis.	kor-e-op'-sis.
<i>Clarkia</i> , H.H.	Clarkia.	klar'-ki-a.
<i>Chrysanthemum</i> , H.H.	Chrysanthemum.	kris-an'-the-mum.
<i>Coleus</i> , T.	Coleus.	kō'-le-us.
<i>Cuphea</i> , T.	Cigar Flower.	kū'-fē-a.
<i>Cyclamen</i> , G.	Cyclamen.	sik'-la-men.
<i>Cucumis</i> , T.	Gourds.	kū'-kū-mis.
<i>Cyclanthera</i> , T.		sī-klan-thē'-ra.
<i>Centaurea cyanus</i> , H.H.	Corn Flower or Bachelor's Button.	sen-tau'-rē-a.
<i>Centaurea candidissima</i> .	Dusty Miller.	
<i>Centaurea moschata</i> .	Sweet Sultan.	
<i>Cleome</i> , H.H.	Spider Flower.	klē'-ō-me.
<i>Cobaea</i> , H.H.	Cup and Saucer Vine.	ko-bē'-a.
<i>Campanula</i> , H.H.	Bell Flower.	kam-pan'-u-la.
<i>Carnation</i> , H.	Carnation.	kar-na'-shon.
<i>Catananche</i> , H.	Cupid's Dart.	kat-an-an'-ke.
<i>Contranthus</i> , H.H.	Red Valerian.	sen-tranth'-us.
<i>Cheiranthus</i> , G. and H.H.	Wallflower.	ki-ranth'-us.
* <i>Canna</i> , T.	Indian Shot.	kan'-na.
<i>Datura cornucopia</i> , T.	Horn of Plenty.	dā-tū'-ra.
<i>Datura arborea</i> .	Angel's Trumpet.	
<i>Diascia</i> , H.H.	Bonnet Plant.	di-as'-ki-a.
<i>Dimorphotheca</i> , H.H.	Cape Daisy.	di-mor-foth'-e-ka.
<i>Dolichos</i> , T.	Hyacinth Bean.	dol'-i-kes.
<i>Dahlia</i> , T.	Dahlia.	dahl'-i-a or dāyl'-i-i.
<i>Delphinium</i> , H.H.	Larkspur.	del-fin'-i-um.
<i>Dianthus</i> , H.	Pink.	di-an'-thus.
<i>Didiscus</i> , H.H.	Didiscus.	di-dis'-kus.
<i>Dracocephalum</i> , H.H.	Dragon's Head.	dra-ko-sef'-al-um.
<i>Erysimum</i> , H.H.		er-is'-i-mum.
<i>Euphorbia marginata</i> , H.H.	Snow on the Mountain.	ū-for'-bi-a.
<i>Euphorbia heterophylla</i> .	Mexican Fire Plant.	
<i>Euphorbia pulcherrima</i> , G.	Poinsettia.	
<i>Eschscholtzia</i> , H.	California Poppy.	e-skeltz'-i-a.
<i>Eccremocarpus</i> , H.H.	Chilian Glory Vine.	ek-kre-mo-kar'-pus
<i>Erzegovine</i> , T.	Ornamental Tobacco.	er-zē-go'-ve-ne.
<i>Eutoca</i> , T. (<i>Phacelia</i>).		ū-to'-ka.
<i>Exacum</i> , G.	Exacum.	ex'-a-kum.
<i>Everlasting Star Flower</i> , H.H.		
<i>Echeveria</i> , H.H. (<i>Cotyledon</i>).		
<i>Echinocystis</i> , T.	Wild Cucumber.	ek-e-vē'-ri-a.
<i>Erythrina</i> , G.	Coral Tree.	e-ki-no-sis-tis.
<i>Gaillardia</i> , H.	Blanket Flower.	e-rith-rē'-na.
<i>Godetia</i> , H.H.	Satin Flower.	gāl-lar'-di-a.
<i>Gypsophila</i> , H.H.	Baby's Breath.	go-dē'-shi-a.
* <i>Geum</i> , G.	Geum.	gip-sof'-il-a.
<i>Gamolepis</i> , H.H.		ge'-um or je'-um.
* <i>Gesnera</i> , G.		gam-o-lep'-is.
<i>Gerbera</i> , G.	Transvaal Daisy.	ges'-ner-a.
<i>Gilia</i> , H.H.		ger'-be-ra.
		gil'-i-a.

<i>Botanical Name.</i>	<i>English Name.</i>	<i>Correct Pronunciation.</i>
*Gloxinia, G.	Gloxinia.	glox-in'-i-a.
*Gladiolus, H.H.	Gladiolus.	glad-iō-lus.
Gomphrena, H.H.	Globe Amaranth.	gom-fre'-na.
*Grevillea, G.	Silver Oak.	gre-vil'-e-a.
Geranium, T.	Geranium.	jer-ā-ni-um.
Humulus, H.H.		
Helichrysum, H.	Everlasting Flower.	hel-i-kris'-um.
Hebenstreitia, H.H.		he-ben-strī'-tia.
*Heliotropium, G.	Heliotrope.	hē-li-o-trōp-i'-um.
Helipterum, H.H.	Humboldt's Everlasting.	he-lip'-ter-um.
Hibiscus, H.H.	Mallow.	hi-bis'-kus.
Helenium, H.H.	Sneeze Weed.	he-lē'-ni-um.
Helianthus, H.H.	Sunflower.	hē-li-an'-thus.
Hunnemannia, H.H.	Tulip Poppy.	hun-ne-man'-ni-a.
Ipomea, T.	Morning Glory.	ip-o-mē'-a.
Ipomea quamoclit.	Cypress Vine.	
Ipomea quamoclit hyb.	Cardinal Climber.	
Ipomea Bona-nox.	Moon Flower.	
Iberis, H.H.	Candytuft.	i-bēr'-is.
Impatiens, T.	Balsam.	im-pa'-shens.
Ionopsidium, H.H.	Violet Cress.	i-ō-nop-sid'-i-um.
Isolepis (Scirpus).		i-so-lep'-is.
Iresine (Achyranthes).	Iresine.	i-re-sī'-ne.
Jacoea, H. (Senecia).	Jacoea.	jak-o-bē'-a.
Kaulfussia, H.H.		kaul-fūs'-si-a.
Kochia, H.H.	Summer Cypress.	kok'-i-a.
Lathyrus, H.H.	Sweet Pea.	lath'-i-rus.
Lavatera, H.H.	Lavatera.	la-va-tē'-ra.
Linum, H.H.	Scarlet Flax.	lī'-num.
*Lantana, G.	Lantana.	lan-tā'-na.
Layia, H.H.		lāy'-i-a.
Leptosyne, H.H.		lep-toz'-i-nē.
Leptosiphon, H.H. (Gilia).		lep-to-sī-fon.
Limnanthes, H.H.		lin-nan'-thēz.
Lupinus, H.H.	Lupine.	lū-pī'-nus.
Linaria, H.H.	Toad Flax.	lī-nar'-ia.
Linaria, G.	Kenilworth Ivy.	
Lobelia, H.H.	Lobelia.	lō-bē'-ll-a.
Loasa, H.H.	Chili Nettle.	lō-ā'-sa.
Lychnis, H.H.	Lychnis.	lik'-nis.
Lychnis coronaria, H.H.	Dusty Miller.	
Lophospermum		
(Maurandia).		lof-o-sper'-mum.
Malope, H.H.	Mallow-wort.	mal'-ō-pē.
Malcomia, H.H.	Virginian Stock.	mal-kō'-mi-a.
Martynia, T.	Elephant's Trunk.	mar-tin'-i-a.
Mattiola, H.H.	Stocks.	ma-ti'-o-la.
Matricaria, H.	Snowball Chrysanthemum.	mat-ri-kar'-i-a.
Mimulus, H.H.	Monkey Flower.	mim'-ū-lus.
Mirabilis, T.	Four-o'clock.	mī-rāb'-il-is.
Maurandya, H.H.	Maurandya.	mau-ran'-di-a.
Mesembryanthemum, H.H.	Ice Plant.	mes-em-bri-an'-the-mum.
Mina Lobata, H.H.	Mina.	mī'-na.
(Ipomea).		
Medicago, H.H.	Snails.	med-i-kā'-go.
Mimosa, G.	Sensitive Plant.	mi-mō'-za.
Momordica, H.H.	Balsam Apple.	mo-mor'-di-ka.
*Musa, T.	Abyssinian Banana.	mū'-za.
Nasturtium, H.H.	Nasturtium.	nas-tur'-shl-um.
Nemesia, H.H.	Nemesia.	ne-mē'-si-a.
Nemophila, H.H.	California Bluebell.	nē-mof'-il-a.
Nicotiana, H.H.	Tobacco Plant.	ni-kō-shi-ā'-na.
Nierembergia, H.H.	Cup Flower.	nē-rem-ber'-gl-a.
Nigella, H.H.	Love-in-a-Mist.	nī-gel'-la.
Nycterinia, H.H.		nik-ter-in'-i-a.
Oxalis, H.H.	Oxalis.	ox'a-l-is.
Papaver, H.H.	Poppy.	pa-pā'-ver.

<i>Botanical Name.</i>	<i>English Name.</i>	<i>Correct Pronunciation.</i>
Perilla, H.H.	Perilla.	per-il'-lā.
Phacelia, H.H.	Phace'lia.	fa-sē'-li-a.
Phaseolus, H.H.	Scarlet Runner Bean.	fa-se-ō'-lus.
Phlox, H.H.	Drummond Phlox.	flox.
Platystemon, T.	Cream Cups.	plat-i-stē'-mon.
Pentstemon, H.H.	Beard-Tongue	pent-stē'-mon.
Petunia, H.H.	Petunia.	pe-tū'-ni-a.
Polygonum, H.H.		po-lig'-o-num.
Pansy, H.	Pansy.	pan'-sy.
Portulaca, H.H.	Sun Plant.	por-tū-lak'-a.
*Primula, G. and H.H.	Primula.	prim'-ū-lā.
Pueraria, H.H.	Kudzu Vine.	pū-er-ar'-i-a.
Reseda, H.H.	Mignonette.	re-sē'-da.
Rhodanthe, H.H.	Swan River Everlasting.	rho-dan'-tē.
Ricinus, T.	Castor Oil Plant.	ris'-in-us.
Rudbeckia, H.H.	Cone Flower.	rud-bek'-i-a.
Rahmannia, G.		rāh-man'-ni-a.
Romneya, G. and H.H.	California Bush Poppy.	rom-nē'-ya.
*Stevia, H.H. (Piqueria).	Stevia.	stē'-vi-a.
Santolina, H.H.	Lavender Cotton.	san-to-li'-na.
Sanvitalia, H.H.		san-vi-tā'-li-a.
Saponaria, H.H.	Bouncing-Bet.	sa-pō-nar'-a.
Scabiosa, H.	Pin Cushion Flower.	skā-bi-ō'-sa.
Schizanthus, H.H.	Butterfly Flower.	skiz-an'-thus.
Silene, H.H.	Catchfly.	si-lē'-ne.
Solanum, G.	Jerusalem Cherry.	sō-lā'-num.
Sphenogyne, H.H.		sfe-nog'-i-ne.
Salvia, T.	Scarlet Sage.	sal'-v-i-a.
Salpiglossis, H.H.	Velvet Trumpet.	sal-pi-glos'-sis.
Schizopetalon, H.H.		skiz-ō-pet'-a-lon.
Sedum, H.H.	Stone Crop.	sē'-dum.
*Streptocarpus, G.	Cape Primrose.	strep-to-kar'-pus.
Statice, H.H.	Sea Lavender.	stat'-i-sē.
Senecia, H.H.	Dusty Miller.	sen-ē'-si-a.
Senecia, G.	German Ivy.	
Santpaulia, G.	African Violet.	sant-paul'-i-a.
Specularia, H.H.	Venus' Looking Glass.	spek-u-lar'-i-a.
Tagetes, H.H.	Marigold.	ta-gē'-tez.
Tydaea, G. (Isoloma).		tī-dē'-a.
Torenia, G.		to-rē'-ni-a.
Tithonia, H.H.		tī-thō'-ni-a.
Thunbergia, H.H.	Thunbergia.	tun-ber'-gi-a.
Tecoma, G.		te-kō'-ma.
Tropaeolum, H.H.	Canary-Bird Vine.	tro-pē'-o-lum.
Thelesperma, H.H.	Cosmidium.	the-les-per'-ma.
Viscaria, H.H.	Viscaria.	vis-kar'-i-a.
Verbena, H.	Verbena.	ver-bē'-na.
Viola, H.H.	Pansy.	vī'-o-lā.
Whitlavia, T.	Whitlavia.	whit-lā'-vi-a.
Xeranthrum, H.H.	Immortelle.	xēr-an'-the-mum.
Zinnia, T.	Youth and Age.	zīn'-ni-a.
Zea, T.	Ornamental Corn.	zē'-a.

SCORE CARDS FOR THE USE OF HORTICULTURAL SOCIETIES.

The following score cards have been prepared by the Committee on Names and Varieties in accordance with a motion carried at the 1917 Convention of the Association, which requested the Committee "to prepare a score card system for judging at Exhibitions of the Horticultural Societies, this work to continue from year to year and that there be presented at the next Annual Meeting a report on the judging of roses, sweet peas, peonies and spring flowering bulbs. That reports on these subjects be considered and discussed at the Annual Meeting at which they are presented and if approved to be adopted by the Association, and that all Horticultural Societies be required to use these score cards

in judging the respective classes at exhibitions and thus secure uniformity.

Inasmuch as it was not possible to carry out the intention of the motion that the score cards be discussed at the Annual Meeting at which they are presented, before being printed in the report of the Association, it is suggested that they be discussed and should any changes be made as a result of the discussion, that they be printed in a revised form in the next report.

The notes on judging flowers which follow the score cards are compiled to make clear what is meant by the various terms which appear on the score cards.

SCORE CARD "A."

TULIPS AND NARCISSI.

Maximum Number of Points, 100.

Form and substance	25
Colour	20
Size	15
Condition	20
Fragrance	10
Setting up or arrangement	10

Each specimen should be uniform with its fellows in all essential characteristics. See note on "Uniformity."

SCORE CARD "B."

PEONIES.

Maximum Number of Points, 100.

Form	20
Size	15
Colour	20
Substance and stem	15
Condition	15
Fragrance	15

Each specimen should be uniform with its fellows in all essential characteristics. See note on "Uniformity."

SCORE CARD "C."

ROSES.

Maximum Number of Points, 100.

Form	20
Colour	20
Size	15
Substance and condition	15
Foliage and stem	10
Fragrance	10
Setting up or arrangement	10

Each specimen should be uniform with its fellows in all essential characteristics. See note on "Uniformity."

SCORE CARD "D."

SWEET PEAS.

Maximum Number of Points, 100.

Form and substance	20
Colour	25
Size	15
Condition	15
Number of flowers to a stem	10
Setting up or arrangement	15

Each specimen should be uniform with its fellows in all essential characteristics. See note on "Uniformity."



Mr. H. C. Cox's Lawn on Lake Shore Road.

NOTES ON THE JUDGING OF FLOWERS.

1. *Form.* The form of a flower is due to the arrangement of its petals, which may be similar and uniformly arranged, as in the tulip; dissimilar but uniformly arranged, as in the sweet pea; and dissimilar and not uniform, as in the pæony. In each example the ideal form is that which most closely approximates to certain general and sometimes personal standards of symmetry, beauty, grace, strength, etc.

2. *Color.* Perfection of color in a flower is sometimes a variety characteristic and sometimes related to the "condition" of the flower. As a variety characteristic color should last for a relatively long time for the variety without fading and should be rich and attractive rather than dull.

3. *Size.* Size in a flower is both a variety characteristic and an indication of cultural skill, etc. If a standard of size for the variety exists, specimens below that standard may be discriminated against, but when they are above that standard and possess other equally good qualities, abnormal size may be considered a merit.

4. *Condition.* Every flower at the time of judging should be in the most perfect phase of its possible beauty. The term "condition" therefore relates to its openness, its freedom from blemishes and its freshness. Condition is partly an essential quality and is partly due to the skill of the exhibitor.

5. *Substance.* Substance in a flower is closely related to its form, because without substance it quickly loses its form and becomes flabby or shapeless. Substance also relates to the stem of the flower because stem and the petals are intimately related. An ideal substance in a flower is one which, while not being coarse, conveys the least idea of perishability and fragility for the variety.

6. *Fragrance.* Fragrance is an essential quality of flowers which, although highly attractive, is relatively possessed by few and can be used only on score cards of certain flowers where fragrance varies much within the species.

UNIFORMITY.

Uniformity, although often used on a score card, is a term not always applicable. It is not applicable, for instance, to single specimens. When used as a heading in the judging of several specimens it should not be given too prominent a place because a judge is invariably apt to consider uniformity when considering each essential characteristic of the flower. Uniformity is not an essential characteristic and it is wiser, perhaps, to consider uniformity under the terms of form, color, size, etc., rather than to use it as a separate heading.

SETTING UP OR ARRANGEMENT.

Setting up or arrangement is the art of displaying flowers in their respective vases so that they show up to the best advantage under the judge's eye. It calls for a certain amount of taste and skill and arranging the foliage and setting up even a single specimen requires judgment. Flowers which have become slightly wilted or delapidated may be restored to their natural conditions by skillful handling. This is quite legitimate and is to be distinguished from "faking" or supplying parts of another flower to replace damaged parts, which is not allowable. The arrangement of flowers in a collection also requires skill, judgment and considerable care.

MINORITY REPORTS ON "SCORE CARDS."

F. E. BUCK, C. E. F., OTTAWA.

The Report on "score cards" had to be prepared at short notice, and two of the members of the Committee had not handed in their contributions at the time when the Report was prepared for the printer's use. Had these contributions been received earlier no doubt the majority report would have been modified to embody many of the suggestions. It is thought desirable, therefore, to present the delayed contributions in the form of minority reports.

Member "A" would modify the score cards with respect to "Fragrance" and one other minor point. Member "B" suggests a new system entirely which

would do away with the method of allotting points on the basis of "relative values" and substitute for it a system of "fixed values." Both suggestions will no doubt provoke valuable discussion at the Convention.

MINORITY REPORT A: Member "A" suggests the following system of score cards and the reason why he differs from the other members of the Committee:—

TULIPS AND NARCISSI.

Form and substance	25
Colour	20
Size	15
Condition	20
Stem	10
Setting up or arrangement	10

PEONIES.

Form	20
Size	20
Colour	20
Substance and stem	20
Condition	20

ROSES.

Form	25
Colour	20
Size	20
Substance and condition	15
Foliage and stem	10
Setting up or arrangement	10

SWEET PEAS.

Form and substance	15
Colour	25
Size	20
Condition	15
Stem, length, and number of flowers	15
Setting up or arrangement	10

REASONS. Member A states, "The only item on which I really would differ from the scoring is in fragrance. In tulips and peonies I should think fragrance as a family characteristic is questionable, and it would penalize the great majority of the finest specimens. As for narcissi, in the most fragrant, the Chinese Sacred Lily, many would say that the least fragrant specimen should receive the highest count, and as ordinary people differ in their appreciation of this particular fragrance might not judges differ also.

Then in roses. While we would say that fragrance is undoubtedly a family trait it is only the minority that have what is accepted as a real rose fragrance, and the others run the whole gamut of perfumes, while in many of the recent creations fragrance is almost lacking. If we insist on fragrance the penalties to be suffered by many fine roses will be great, and then what a task for the judges. One judge cannot accept another judge's scoring on this point and when ten per cent. is allowed this may become a serious bone of contention at

exhibitions between judges and also be the reason for many an appeal from the exhibitor. One thousand roses is no unusual number to confront a judge, and his powers of differentiation would be greatly taxed before he ended and above all he has no tangible standards to go by. Can a true rose fragrance, such as, say, of some of the *Rugosa* hybrids, be compared with, say, the characteristic carnation perfume of *Caroline Testout*? Or how about the alcoholic tendency of *Camoens*? Would not some of our most reliable judges change their ideas of the acme of perfection when such a reminiscent odor suggests itself? Is fragrance as a requirement fair to our established gardens, is it fair to the rose itself and is it fair to the judges?

The only other item I would differ on is for tulips and narcissi, to give recognition to the stems, this being most necessary in Darwin tulips; and also to give points for length of stems in sweet peas.

In substance I would not like to see "the least idea of perishability and fragility" penalize delicacy which in many flowers, and roses and sweet peas in the present list, is a worthy attribute.

MINORITY REPORT B: Member B believes that in future judging methods must be standardized and gives the following reasons why he suggests a new type of score card.

1. The chief obstacle to the adoption and successful working of any system of score cards is the legitimate but uncertain element of "personal taste" of the judges.

2. Therefore, to offset that obstacle and in order to make score cards simple and workable it is necessary to give up almost completely the old system of relative values.

3. By relative values is meant the method whereby the points are apportioned on the score card. For instance, the character of a flower, described under the heading of "Form," may have as many as twenty-five points allotted to it, while color may have twenty points allotted to it. Flower characteristics are supposed to have different values, but very few judges agree absolutely on the apportionment of the points to express these values.

4. It is proposed, therefore, to establish a system of score cards which will make it immaterial whether the judges agree or disagree on the apportionment of such points, and allow them to keep their personal opinions on such matters.

The advantages of the system will be:

- (a) That a uniform system of judging will be possible.
- (b) Greater sureness and dispatch will be obtainable.
- (c) The system will more closely approximate the methods of experienced judges who seldom use score cards.

The principles underlying the system are briefly as follows:

First, the three universal characteristics of flowers are taken and allowed twenty points each. These three characteristics are Form, Color and Size.

Second, the special characteristic or characteristics which distinguish the particular kind of flower are grouped under the fourth heading and allowed another twenty points.

Third, the exhibitor's skill is then taken into consideration and twenty points are allotted under the fifth heading, which generally deals with setting up or arrangement, but may include something else in that, provided it is connected with the skill of the exhibitor.

The reason why the system of relative values on the score cards is replaced by the different method is that the judge in making his award has no reason

at all to consider relative values. He is confused in his judging by so doing. What a judge does do is to compare the merits of say exhibits A, B and C with regard to certain fundamental characteristics and skill on the part of the exhibitor. It is far easier for him to remember that he has to compare all these characteristics on a uniform basis than it is for him to be constantly referring to the score cards to see how many points are awarded for this characteristic and the other characteristic. It is confidently believed that the complicated type of our present score cards is the great reason why experienced judges do not favor or use score cards to any extent, and it therefore follows that where that is the case there can be no uniform system of judging.

A simple standardized score card system should be universally used and of great help.

TULIPS AND NARCISSI.

Form and substance	20
Colour	20
Size and stem	20
Condition	20
Setting up or arrangement	20

PEONIES.

Form	20
Size	20
Colour	20
Substance and stem	20
Condition	20

ROSES.

Form	20
Colour	20
Size and stem	20
Condition and foliage	20
Setting up or arrangement	20

SWEET PEAS.

Form and substance	20
Colour	20
Size and stem (length and number of flowers)	20
Condition	20
Setting up or arrangement	20

REPORT OF REPRESENTATIVE TO CANADIAN NATIONAL EXHIBITION.

P. H. MITCHELL, TORONTO.

As your representative on the membership of the Canadian National Exhibition in 1918, I beg to report as follows:

The Board of Directors of the Exhibition accepted me as a member representing the Ontario Horticultural Association on March 15th, 1918.

On March 30th, I attended the meeting of the Agricultural Committee which mainly dealt with the prize lists and classes. It is this Committee that your

representative is particularly connected with and it deals with three sections, namely, (a) Grain, Roots and Vegetables; (b) Floriculture; (c) Fruit and Honey. It is obvious that our Association is interested mainly in Vegetables, Floriculture and Fruit.

The Toronto Horticultural Society also has 'a representative on the same Committee, Mr. W. J. Evans.

Your representative was able to have several items in the rules for exhibiting made more specific; several classes amended so as to adapt to present day conditions, particularly in dahlias; Rose Class for Amateurs limited in number; and further, in displays, that quality of flowers was made of greater importance than arrangement.

Several other changes of importance were made at Mr. Evans' suggestion and others by the Committee as a whole so that the list now shows considerable improvement.

The subject of large displays by Horticultural Societies was gone into at length, but as there was no prospect of an appropriation for a prize list of fitting magnitude this was left over.

Your representative was frequently present at the Horticultural Building during the exhibition and I hope was of some assistance to the exhibitors.

(Signed) P. H. MITCHELL.

THE BURGOYNE MUNICIPAL ROSE GARDEN IN ST. CATHARINES.

Moved by DR. F. E. BENNETT, seconded by REV. DR. SCOTT, "That we record on the annals of this Society our unbounded appreciation of the magnificent gift of Mr. Burgoyne of a Municipal Rose Garden to the City of St. Catharines. Mr. Burgoyne is one of the most energetic and enthusiastic horticulturists in the Province and a former President of this Association. In placing on record our deep gratitude we cherish the hope that Mr. Burgoyne may be rewarded by seeing his example copied, and that it may be our good pleasure to record from time to time similar gifts which will be at once an inspiration and an impetus to increased activity on the part of all Horticultural Societies. Carried.

Mr. Burgoyne replied stating his appreciation of the manifestation toward him of the Convention. He said he got his inspiration from the municipal rose gardens of the United States in Hartford, Conn., and in Minneapolis, and he saw no reason why Canada should not have such gardens as well: that out of his deep appreciation at having been allowed to close four decades of business life he could do nothing that would give himself greater pleasure than this, as he termed it, small gift. He said he wanted to feel that the young people growing up should feel that it was *their* garden.

Rev. Dr. Smith, of St. Catharines, paid very high tribute to Mr. Burgoyne as a citizen of St. Catharines for the splendid help he had always yielded in the beautifying of the city, and also the encouragement given the girls and boys at all times in the matter of the school gardens. "While we are proud of the donation," said Mr. Smith, "we are doubly proud in hearing this testimony of appreciation from this Association."

JUDGING THE DECORATIVE CLASSES.

MISS MARY YATES, PORT CREDIT.

The subject of the arrangement of cut flowers merits far more interest than is popularly supposed, though much is being done to draw attention to it by individuals who appreciate a study of the basic principles of beauty.

There is no doubt that the decorative classes should be encouraged by every means in our power, the purpose behind their encouragement being the educational possibilities that lie in the development of a sense of artistic values in any individual.



From the Dunlop Nurseries.

These classes include the arrangement of flowers and foliage to form:

1. Table Decorations.
2. Buttonholes, sprays, bouquets, sheaves, bunches (as Violets) or the flat French effects with mixed flowers.
3. Bowls, baskets and vases.
4. Displays, groups and stands, a large entry of which adds considerably to the attractions of the Showroom.

The primary purpose of the entries in these classes is the enhancement of our home life by the decoration of our persons and of the living rooms, halls, stairways and sun parlors of our homes.

Their secondary purpose is to strengthen the recognition of the fact that beauty depends upon elegance rather than upon rarity of bloom which should not count, in these entries, more than the beauty of those less rare.

Economic value ranks high in the estimation of commercial judges, and in their recounts special attention is paid to relative financial values, or to difficulties in cultivation. *Per contra*, educational judges, in doubt of the order of merit in these classes, pay special attention to artistic values and to difficulties in arrangement.

It should be remembered that entries in the Amateur Decoration classes are not intended for sale, their beauty is intended to be loved and lived with, not merely to be stared at, as some one has well said.

Outside the group of brave people told off to give their opinion upon Amateur decoration, there is little open discussion, in the Societies, of fundamental principles upon which judgment is based. Personal taste is a delicate subject with many: and otherwise courageous beings, are often cowards about disclosing and eventually maintaining their views about artistic values. The opinion of the general public is interesting and it is noticeable that ability to arrange native flowers effectively is greatly admired, by those, too, who seldom make use of them in their own homes. Classes for their arrangement are nearly always a centre of interest in shows where they are provided for. "Collections" of native flowers are not meant, but arrangements in vases, baskets or bowls. In illustration it may be mentioned that the President of a Horticultural Society offered a handsome prize for table decoration, the material to be selected freely by those competing and judgment to be pronounced by public vote. On counting up it was found that the arrangement of wild flowers had secured the highest vote and in a class too, where many costly flowers had been used.

The winning table was dressed with the dainty "butter and eggs" abundantly in bloom by the wayside at that time. The flowers had merely been delicately massed in bowls of lavender-blue pottery and the table evidently made its own appeal by reason of its naturalness.

What may be called *the natural style* in arrangements, is a comparatively recent interest, in contrast, that is, to *the decorative or formal florist's method*.

At no very distant period all Art ran to decoration, and some exhibits, even still, appear to be valued more for the design than for actual arrangement.

General taste at the present time is mostly in favor of loose arrangements of long-stemmed flowers, stiff formal designs are tabooed, and the "pyramid" as a popular table design has vanished.

Flowers of course should be fresh and used as cut from the plants, no artificial aids to be allowed in this style of arrangement. It is easy to see why length and strength of stem is of such importance to the grower of cut flowers.

The American Rose Society scores length of stem as follows:—

6 inches	1 point.
6-8 inches	2 "
8-10 inches	3 "
10-12 inches	4 "
Over 12 inches	5 "

A detailed discussion of the rival merits of judging systems for decorative classes, used by Horticultural Societies in other countries is hardly in place here. it is sufficient to state that an interesting literature exists, for the Art of flower

arrangement is a very old one, and much study has been given to it. The Japanese attach great importance to individuality, distinction, refinement, and fragrance.

In the British R.H.S. freshness, elegance of habit, and arrangement, count for a good deal.

After considerable thought I submit the following for consideration when studying the entries in decorative classes.

In an analysis of the beauty of an arrangement intended for home use should not *naturalness* count first, namely the recognition of the beauty of a few flowers naturally arranged? Over-crowding and tightly packed blooms do not dispose themselves gracefully and super-abundance frequently coarsens and cheapens the effect of the whole. Possibly the second point to consider is that of *grace and beauty of line*—line if possible without repetition—the stems being frankly exposed for the purpose. An impression of strength and vigor in composition is frequently conveyed by the origin of these same stems.

Other points to be considered from the standpoint of the natural style in arrangement, might be those of *simplicity* in all directions, and the *sense of proportion* and suitability in the relationship of the water container to the material used. The *color scheme* of the whole arrangement would count of course whether it represented harmony, uniformity or contrast. If these five primary considerations were applied to the analysis of the beauty of any bowl or vase of flowers, with say 20 points given for each heading, we would have a score card as follows, under the divisions of which the secondary considerations could be taken up:—

1. Recognition of beauty of few flowers naturally arranged— <i>naturalness</i> ..	20
2. Elegance— <i>grace and beauty of line</i>	20
3. <i>Simplicity in all directions</i>	20
4. <i>Sense of proportion</i>	20
5. <i>Colour schemes</i>	20
	100

The decisions of judges have very frequently to be arrived at by comparisons made between defects in the entries, rather than between their beauties, or between the entries and the ideal in mind, at the same time Judges employed by the Association should be able to fill out a score card, if requested, for any exhibition desiring one, whether the award was based on judgment by score, by comparison, or by guess.

RASPBERRIES AND CURRANTS FOR THE HOME GARDEN.

W. T. MACOUN, DOMINION HORTICULTURIST, C.E.F., OTTAWA.

Now that we are thinking more about the food we produce and eat than we used to do, both from the standpoint of patriotism and of our pockets, it is a special pleasure to contribute any information which will encourage the production of fruit in our gardens.

Vegetables may be more necessary than fruit, but we cannot do without fruit, and he or she who has picked it in his own garden knows how desirable it is to grow one's own.

Two fruits, only, will be dealt with in this short paper, the raspberry and the currant; but, needless to say, no garden should be without strawberries where any small fruits are grown.

Both the raspberry and currant need an abundance of moisture to do well, and, while both of them will stand some shade, they succeed best in full sunlight. In order that those with very small gardens may get some idea as to whether it won't be worth their while taking up space with either raspberry or currant bushes, it might be well at the outset to state how much room the bushes require and what yield might be expected.

Experiments have shown that a very satisfactory distance apart for raspberry bushes is three feet in the row with the rows six feet apart, thus each bush occupies 18 square feet; or if the bushes are planted 5 feet apart each way, each bush occupying 25 square feet, they will not have too much room. A single row across part of all of one end of the garden close to the boundary line with the plants 3 feet apart may be found desirable. The yield which might be expected from the area occupied by say 12 original plants, occupying one row 36 feet in length, will depend very much on the variety, the care the plants receive, the character of the soil, and in the colder parts of Ontario on whether they are injured by winter or not. The best yield obtained at the Experimental Farm, Ottawa, was from the Herbert variety which from two rows each 18 feet long (equal to 1 row 36 feet long) yielded 50 lb. 12 oz. of fruit, which is at the rate of 10,234 lb. per acre. One half of this amount is a yield which might be expected in an average garden in an average year, or say about 2 lbs. from each plant. Thus, there would be in the 10 to 14 pickings which might be expected about 2 lbs. at each picking. As there is about a pound of fruit in a well filled box such as is purchased, one will be able to decide from these figures what area it will be necessary to devote to raspberries in order to have sufficient for the family needs. One must not, however, make the mistake of thinking that a full crop is obtained at once. If the plants are set out in the spring of 1919, no fruit need be expected that year, but in 1920 a half crop might be obtained, or say a dozen boxes from the 36 feet, and in 1921 there would be a full crop.

Raspberries may be planted successfully either in the autumn or in the spring. The advantage of planting in the autumn is that if any plants die they may be replaced in the spring, whereas if planted in the spring, it may be too late to plant others when the dead ones are noticed and so a season will be lost. A very good plan in order to better ensure having a perfect stand is to plant two plants in each hole or close together so that if one dies the other will probably live. There is nothing in the method of planting raspberries which one who plants herbaceous perennials needs to learn. The plants should be set about an inch deeper than they were before and the soil made firm about them with the foot. Planting a little deeper than they were before is recommended so that they will not be planted shallower than they were before, and if they are planted in the autumn it provides for a little heaving which will occur under some conditions. Plants should be cut back to within six inches of the ground when planted. Raspberries need good soil but the average garden soil will usually be found quite suitable. The oftener the surface of the soil is loosened with the hoe the first season the stronger the growth will be, and, as the crop the second season will be grown on the canes made the first season the importance of having good canes can readily be understood. No pruning will be needed the first season. Frequent hoeing should be given the soil about the bushes during the second season as in the first, and during this year suckers will be sent out several feet from the original plants. It will now be necessary to decide on whether the original plants will be kept as single plants or whether suckers will be allowed to grow up and a continuous row of plants about three feet in width maintained from year to year.



Exhibit of St. Thomas Horticultural Society at Western Fair, London.

The better plan, we think, when raspberries are grown in a garden is to keep all suckers hoed out and depend on the canes which grew from the base of the original plants. These plants will, as a rule, give excellent crops for eight or ten years, and are easier handled in a garden than a matted row, which is liable to get too wide and prove troublesome in the garden. The canes which bear the fruit die each year after fruiting and their place is taken by new ones which grow up during the summer. Usually, however, there are too many new ones for best results, hence, when cutting out the dead canes the weaker of the new ones should be removed also. About six strong canes are enough to leave, as when these throw out side shoots when growth begins the space allotted to each plant will be well taken up, and too much crowding results in poorer fruit. In gardens where the soil is rich and the growth very luxuriant it will be found desirable to tie the canes of each plant loosely to a stake to keep the fruiting branches from bending down and touching the ground and the fruit getting dirty. A good plan is to have posts driven into the ground from 10 to 12 feet apart, to which are nailed cross pieces about two to three feet long and three feet six inches from the ground. A wire is now run along each side of the row and fastened to the cross-piece. This makes an excellent support for the canes. The canes often grow taller than it is desired to leave them, but they are not cut back until spring as they may be injured by winter. In the warmer parts of Ontario it is not necessary to protect canes in winter, but in Eastern Ontario it is found desirable to bend the canes down just before winter sets in and hold them down with some soil on the tips. They are thus usually protected with snow through most of the winter and come through very well. In some parts of the prairie provinces it is necessary to entirely cover the canes of most varieties to ensure their being uninjured. The canes are uncovered in Ontario as soon as the frost is out of the ground in the spring, and the canes are then cut back to from four to six feet in height.

Only one variety of raspberry has been mentioned so far, namely, the Herbert. This has been found the best for home use at Ottawa, but the great commercial berry in the warmer parts of Ontario and also one of the best for home use is the Cuthbert. The Cuthbert is not quite so juicy as the Herbert, hence not so popular with many as a home berry as the Herbert. Other red varieties might be mentioned, but for a home garden either of these is sufficient. The purple raspberries are very popular with some, and the best of these is the Columbian. These do not sucker, hence can be kept within bounds easier than the reds, but the fruit is more acid and not so palatable to most people when eaten raw as the red. The Black Cap raspberries are not recommended for the average small garden as they are not so popular as the red or purple, and results with them are very uncertain except in the warmest parts of Ontario. Hilborn, Older and Gregg are three of the most reliable.

While the currant is not so popular as the raspberry, and while comparatively few like them raw, no one, we think, will deny that red currant jelly and black currant jam are both delicious and should be well represented in the winter's supply of preserved fruits, and those who have got the habit of eating some red currants in the garden just before breakfast, or at the breakfast table, know how appetizing they are. This being so, each one should consider whether a place in the garden can be found for a few bushes.

The highest yield obtained from six bushes of red currants in one season was 79 lb. from a variety called Long Bunch Holland. This is at the rate of 19,118 lb. per acre, but half of this amount would be a good yield in an average season for the larger fruited varieties. The Red Cross, one of the most reliable of these,

averaged per year for a five year period 5,929 lb. per acre or nearly 20 lb. from six bushes per year, which is only about one-fourth of the crop of the highest yield obtained in any one year. The Pomona, another good variety, averaged for a five year period about 25 lb. from six bushes per year. Perfection is one of the best of the newer sorts. There is a marked difference in the hardiness of red currants, the larger fruited varieties such as the Fay Prolific, Cherry and Comet being the tenderest and very poor yielders at Ottawa, while at the other extreme are the Red Dutch, Raby Castle, Long Bunch Holland and Red Grape, which are very hardy but much smaller. Between these, are the Red Cross, Perfection and Pomona, which have comparatively large fruit and give a fair to good crop in the colder parts of Ontario and a good crop in the warmer sections. The Wilder is of good size but not quite hardy enough at Ottawa.

Two year old plants are the best kind to plant, and when these are used there will be a little fruit the year after planting, though nothing more than to whet the appetite, but in the year following there should be from one to two pounds to a bush, and the fourth season the bushes will be nearly in full bearing.

Black currants do not yield quite so much as the red, although some astonishing high yields have been obtained at Ottawa. The largest yield was from a variety called Topsy, originated by the late Dr. Saunders, which in 1914 yielded 63 lb. 4 oz. from six bushes, or at the rate of 15,306 lb. per acre. But, as with the red, half this amount would be a good average. Topsy is a hybrid between the Dempsey Black Currant and a Gooseberry. There is, as in the red currants, a marked difference in the hardiness of varieties. The Boskoop Giant, which bears very large fruit, is a light cropper at Ottawa, and so is the Victoria Black, another large fruited sort. These bear better crops in the warmer sections. Of the very large fruited varieties, the Buddenborg has proved the best cropper at Ottawa. The Black Champion has been one of the most popular sorts in Ontario, but the varieties originated by the late Dr. Wm. Saunders, such as Topsy, Magnus, Kerry, Clipper and Climax, while not of the largest size, are of good size and are hardy and productive and of good quality. There will be a little fruit the year after planting black currants, but the third season there should be half a crop, and the fourth season nearly a full crop.

Currants may be planted either in the autumn or the spring, but autumn planting is preferable, as the bushes start into growth very early in the spring, and will get a better start if they have been planted in the fall. A good distance for both black and red currants has been found to be six by five feet apart. Bushes grow to be a large size in a garden and require this amount of space for full development. Good cultivation is required in order to get strong growth. Little or no pruning is needed the first year. The black and red currants bear most of their fruit on wood of different ages, hence the pruning of one is a little different from the other. The black currant bears most of its fruit on wood of the previous season's growth, hence it is important to always have a plentiful supply of one-year old healthy wood: the red and white currants produce their fruit on spurs which develop from the wood two or more years of age, hence it is important in pruning red and white currants to have a liberal supply of wood two years and older, but as the fruit on the very old wood is not so good as that on the younger, it is best to depend largely on two and three year old wood to bear the fruit. From six to eight main stems, or even less, with their side branches will, when properly distributed, bear a good crop of fruit. Future pruning should be done with the aim of having from six to eight main branches each season and a few others coming on to take their places. By judicious annual pruning the bush can be kept sufficiently open to

admit light and sunshine. A good rule is not to have any of the branches more than three years of age, as if kept down to this limit the wood will be healthier, stronger growth will be made and the fruit will be better.

The chief enemy of the red currant is the Currant Worm, and too often one finds the bushes in the garden stripped of leaves, as the worms are numerous and they eat very rapidly. When the leaves are eaten the fruit does not ripen properly and the bushes are weakened, which affects the next year's crop. There are usually two broods of the Currant Worm, the first when the leaves have about reached their full size and the second when the fruit is beginning to ripen. A close watch should be kept for them as they are almost sure to be on the bushes every year. For the first brood a weak mixture of Paris Green, 1 oz. to 10 gallons of water, will kill them. For the second brood a less poisonous substance should be used as the fruit will soon be ripe. If the bushes are thoroughly sprayed with White Hellebore in the proportion of 1 oz. to 2 gallons of water there will be no danger to human beings and the worms will be killed. Hellebore could be used for the first brood, but it is important to kill them as soon as possible, hence an arsenical poison is preferable. Aphis are sometimes troublesome, and for these the ordinary contact sprays such as Nicotine Sulphate, Black Leaf 40, and soap washes are used. The spray must strike the insects, hence it should be applied to the under side of the leaves.

Currants should be kept well cultivated, pruned and fertilized, and, if well cared for, will yield bountiful crops.

THE DAHLIA.

JAS. S. WALLACE, TORONTO.

The Dahlia in its wild state was known to Europeans in Mexico as early as the year 1600, and in 1615 was described and illustrated by Francisco Hernandez in his book "The Plants and Animals of New Spain." It was no doubt abundant then as now in its native habitat—the Mexican Highlands and mountain sides 5,000 feet above the Sea—and was known by the natives as *Acotii*.

The flowers of red, yellow and purple, consisted of a single row of flat petals about a central disk of yellow florets, and were small to medium in size, resembling our *Cosmos* and *Coreopsis* to which it is closely related.

In 1789 the director of the Mexican Botanic Garden sent seeds of the plant to director Cavanilles of the Royal Gardens at Madrid, from which the latter grew not only single but semi-double flowers. In 1791, Cavanilles published a figure and description of the semi-double form and named it Dahlia in honor of M Andre Dahl, an eminent Swedish botanist of that period. About the same time seeds were sent to England, but being grown under glass, the stock lived only two years. About 1812, M. Donkelaar of Louvaine did valuable work in developing full double flowers from singles in the 3rd generation.

From this modest beginning the Dahlia has since passed through one of the most wonderful developments known in floriculture, and to-day it probably shows a greater diversity in form, color, habit and size than any other species known to the florist.

Easy of cultivation, adapted to a wide range of soils and conditions, with plants of a size and habit to suit almost any garden, and with a long season of

bloom, it is not surprising that the Dahlia is so popular in England, and is rapidly coming to the front in America.

Many commercial fields of from five to one hundred acres may be seen in the New England States and at the Government Experiment Stations at Geneva, N.Y. and St. Paul, Minnesota. Dahlia testing plots are grown. English Dahlia Societies maintain gardens where growers may send their new varieties to be grown under observation, and The Dahlia Society of California has recently established trial gardens at San Rafael in that State.



Gladiolus Lady Borden, originated by A. Gilchrist, Toronto.

The Dahlia has been grown in England since 1802, and the present form of the Show or Ball-Shaped variety since 1840. The flatter decorative form was re-introduced and became popular about 1870.

The modern Cactus Dahlia is descended from a single tuber sent to Holland in 1872, in a collection of Mexican plants and roots, and is probably the most popular form of the flower. Beautifully incurved blooms 7 and 8 inches in diameter on good stems are not uncommon, the majority of newer varieties coming from the English growers. The Paony-flowered came from Holland in 1900, and is the result of crossing the cactus and single varieties. The Dutch still excel in this class, while some of their new Decoratives are commanding attention with twisted and pointed petals suggesting a Cactus Strain in their breeding.

The Collarette Dahlia originated in France 1901, and is very popular in England though seldom seen here.

Modern forms of Cactus-Decorative and Pæony-flowered varieties are little known in Canada and our gardening members who have tired of the old fashioned ball-shaped flowers may find keen enjoyment in growing tested varieties of these, some of which are named in this article.

Before making selections see the plants in bloom, if possible, and, where space is available, do not limit the number of types to be grown as the greater the variety of form and color the more lasting will be the interest and pleasure obtained from their culture. Start your collection with recognized standard varieties; many of the good ones grown to-day are quite cheap.

SOIL AND LOCATION. Dahlias seem to do equally well in a variety of soils, although sandy loam is considered best. It must not be too rich or the gardener will have foliage instead of bloom.

The location should be well drained, open to the sun and a free circulation of air, but protected from high winds. Do not plant near trees or shrubs—shade and excessive watering will produce bushy plants with very few flowers, and these usually hidden by foliage.

The Dahlia loves cool nights and does particularly well in the vicinity of bodies of water.

PREPARATION. When possible prepare your ground in the Fall and dig over again in Spring allowing it to mellow before planting. Dig deeply—at least a foot—and give the plant roots a chance to reach moist cool earth when the hot days come.

If soil is light, add old manure at first digging, but if heavy, a liberal addition of coal ashes or sand will improve it. Manure from sheep stables is very good, and one prominent grower uses bone meal and potash as fertilizer with success. Old manure helps to retain moisture in the soil, but when this is not available use two parts of wood ashes to one of bone meal, or a complete potato fertilizer. A top dressing of lime (without manure) is sufficient for some heavy soils. Never use lime and manure together.

PLANTING AND CULTIVATION. Planting time varies with locality, but, where only a few plants are grown, the first of June is recommended. Never plant in cold soil. Where possible, divide your stock of tubers and plant equal portions May 15th, June 1st and June 15th, and if a hot dry summer follows, the early planting may suffer from excessive heat at blooming time, while the later ones will enjoy a succession of bloom. When plants from cuttings are used instead of tubers, June 1st is early enough for setting out. Where early bloom is desired, start the tubers inside in pots or boxes in April and transplant to the garden when danger of frost is passed. Space plants three feet apart if possible. In planting make a trench or hole five to six inches deep, place tuber on its side in bottom of furrow, cover with two inches of soil and gradually fill in level as stalk develops. Never allow crowns to be exposed.

If soil is heavy and wet, surround the tuber with clear sand to prevent rot.

It is a good plan to place stakes when tuber or plant is put out.

Give a good watering at planting time but subsequent watering must be governed by conditions. An occasional rain will keep the plants in good shape, but if a dry period comes, give plants a thorough soaking once a week. Learn to water by experience, and be sure to moisten the root area, not the surface only. Frequent sprinkling is harmful but, after buds come, spraying the foliage in the evening during the hot spell will help to keep plants growing. Keep soil about plants cultivated after every rain or watering; never allow ground to cake.

Do not cultivate close to plants after buds form, or you may injure the new roots. Grow one stalk only in a place, and when plants are a foot high, tie securely to a stake with raffia or soft cord, and renew the fastening as plant develops.

If a stocky growth is desired, remove centre bud when plant has three pairs of leaves. This will delay blooming somewhat but will not hurt the plant.

When the buds appear, use a mulch of old manure—at least three inches deep—or where this is not obtainable, mulch with grass clippings, leaves, or fine straw, and give plants weak manure water (after watering) every ten days. The mulch conserves the moisture and saves watering.

Working bone meal or other fertilizer in to the surface of the soil about the plant after blooming a few weeks helps to ensure good flowers. Pulverized sheep manure or four parts meal to one of nitrate of soda give good results. Use a small handful to each plant.

If plants become hardened or blasted by excessive heat, cut them down at once and the established root system will quickly give you one or two new stalks and excellent flowers before frost comes.

PROPAGATION. In America, field grown tubers or pot roots are planted, while in England, shoots or cuttings are favored.

Do not divide the field clumps until the sprouts appear, but if latter are two inches long, cut them off half an inch from base before planting, as a stronger sprout will quickly develop. The size of the tuber does not indicate either the size or quality of bloom.

Plants from tubers and cuttings stand drought better than those from pot roots and while plants from cuttings give fine exhibition blooms they are not so free flowering as plants from tubers.

In propagating by cuttings, remove the clumps from storage in March and place on forcing table or similar situation with temperature of 60 degrees. Cover to level of crown with sand, moss, or some moisture holding medium and water sparingly at first for fear of rotting tuber. When sprouts appear, water more freely to hasten growth. When shoots from the tuber are three inches long or have three pairs of leaves, cut them off with a sharp knife just below first joint to ensure early rooting of the cutting and facilitate future tuber formation. Trim off lower pair of leaves close to the stem and plant cutting in clean sand up to second pair of leaves, on bench or in a box, and keep temperature about 65 degrees. Sand must be at least six inches deep. Plants should root in three weeks and can then be potted for transplanting to the garden. Plants from both cuttings and seeds often do make full-sized tubers. In growing from seed one good seedling in fifty plants is a high average.

CUTTING. In cutting blooms take long stems with one or two joints as this helps the plant and is all the disbudding most varieties need. Cut in the evening or early morning and place stems in water immediately.

For long keeping, remove most of the foliage and immerse the stem for five minutes first in water as hot as the hand will bear, and then in cold water containing one teaspoonful of salt to the gallon. Water should not be quite so hot for soft stemmed varieties.

For choice flowers, develop only the centre bud in the clusters of three, nipping off the two side ones.

Never allow blooms to die on the plant.

HARVESTING AND STORING ROOTS. Two or three days after a killing frost, cut off stems close to the ground and dig the clumps of roots carefully, remembering

that roots of some varieties extend out from base of plant. Shake off the loose dirt and expose to the air for a few hours. Remove to winter quarters and pack with stems down in boxes or barrels. Never pack wet roots. In a dry room with temperature of 40 degrees to 50 degrees they will keep without covering, but if temperature is liable to go higher, cover with old ashes or sand. Small tubers had better be kept separately in ashes or sand as they are liable to dry up if exposed to the air. After January, if tubers appear to be drying up, moisten them by covering with several layers of heavy paper on which water is sprinkled. If rot appears on tubers, scrape or cut it away and dust wound with slaked lime.

NOTES. After plants are ten inches high, spray regularly once a week with tobacco or soap solutions and discourage insect pests.

If the roots of plant are attacked, a glass of lime water will often stop the trouble. Soot or slaked lime about young shoots will keep away cut worms.

Several well known Dahlias have a distinct and agreeable odor.

RECOMMENDED VARIETIES. The Dahlia Catalogues contain names of thousands of varieties but those named above are in the writer's opinion at the top of the list:

RECOMMENDED VARIETIES.

Good Ones at a Modest Price:

Countess of Lonsdale.
Delice.
Rene Cayeux.
Papa Charmet.
A. D. Livoni.
J. H. Jackson.
Mme. H. Furtado.
Floradora.
Princess Victoria.
Grand Duke Alexis.
Genoveva.
Rev. Jamieson.

Some of the Very Best:

Geisha or Orient.
Marguerite Bouchon.
Kalif.
Mina Burgle.
Mildred Slocombe.
Albatross.
Yellow Colosse.
Mrs. Geo. Gordon (Sweet Scented).
Union Jack or Crystal.
King of the Autumn.
Rheinischer Frohsinn.
Sir Douglas Haig.

A NATIONAL FLOWER FOR CANADA.

F. E. BUCK, CHAIRMAN OF THE OTTAWA COMMITTEE.

The question of adopting a national flower for Canada was not made a national question until the autumn of 1917, when, as already stated by the Secretary, a report submitted on behalf of an Ottawa Committee was adopted by the Ontario Horticultural Association at its annual convention in Toronto in the month of November.

The very satisfactory amount of interest and discussion which has taken place since then throughout the Dominion may be attributed to the action taken at that convention. As a result of the adoption of the original report the Ottawa Committee was empowered to add to its numbers and now consists of the following: George Simpson, President of the Ottawa Horticultural Society; W. T. Macoun, Dominion Horticulturist; J. M. Macoun, Botanist of the Geological Survey; Dr. M. O. Malte, Dominion Agrostologist, Miss Faith Fyles, Assistant Dominion Botanist; F. E. Buck, Assistant Dominion Horticulturist, Chairman; and J. B. Spencer, Chief of the Publications Branch, Secretary. This Committee, in placing before the Convention this year its report, trusts that other steps will be taken which will carry the matter of adopting a national flower into the final stages.

The Secretary has mentioned in his report the fact that the *Hepatica* and *Trillium* were considered suitable flowers for the Province of Ontario by the Toronto Committee, which, under the Chairmanship of Prof. R. B. Thomson, met together to consider the matter of a national flower. This Convention, therefore, should have its attention called to the possibility that the Provinces are likely to adopt Provincial flowers. The Ottawa Committee has not felt it desirable to discuss the question of Provincial flowers to any extent, feeling that such work should be undertaken by Provincial Committees, but will be very glad to collaborate with such Committees in any way possible. The following extract from a letter received from Prof. R. B. Thomson, of the Botanical Laboratories, University of Toronto, is given to confirm the above suggestion:

"The Committee also expressed hearty approval of the idea of decorating the soldiers' burial places with typical Canadian flowers and submitted a small planting list, suggesting that the other Provinces should do likewise."



M. C. R. Park, St. Thomas, formerly a weed patch.

It is possible also that if Committees were established in each Province to look into the matter that the work of the Ottawa Committee would be made very much easier, as, without doubt, the time is extremely opportune for the adoption of Provincial flowers. The argument used by the Ottawa Committee as the reason why it was opportune to discuss the question during the war was that at the close of the war such a flower would be of great value for use on the burial grounds of Flanders. It is more than likely that each Province would far rather use some peculiarly typical Provincial flower to adorn the burial grounds of its sons than one which, although called the national flower, might be less typical of the Province.

Without doubt there does exist a very distinct and intelligent desire for a national flower. Discussion in this connection has been carried on all over the Dominion and a surprisingly large number of editorial and press references have dealt with the question. While the discussion has shown that such a desire exists and is well upported by many citizens in every part of the Dominion it has also shown that there are some who are jealous lest the maple leaf should

be supplanted. It should be pointed out, therefore, that the question of a national flower has not very much more to do with the maple leaf than it has to do with its animal life, which is typified by the beaver. It is not a question of substitution but addition. A tree can never be used to typify Canada's flora. A national flower for Canada is a new question. "The maple leaf forever" and "Canada, the land of the maple" are established terms. The term, "Lady of the snows" is also apt and striking, but these terms only describe one phase of Canadian life and are incomplete without some term which may be used to describe her wonderful flora. By adopting a national flower Canada will also be known as the land of the Trillium, or of the Columbine or the Wild Aster or the Tiger Lily, and a complete picture of Canada will then be possible in terms which will describe her in her winter, spring, summer and autumn garb. It should, therefore, be pointed out that those who ask that a national flower be adopted in Canada ask not that her prestige be lessened or that her accepted symbols be discarded, but rather that they be enlarged and established.

The initial reasons given by the Ottawa Committee why Canada should have a national flower were, of course, somewhat comprehensive, but there is one reason alone, namely, the desirability of having flowers representative of Canada to plant on soldiers' graves in the burial grounds of Europe which should be sufficient to justify immediate action on the part of all interested persons, and therefore the Committee has pleasure in suggesting that this report be adopted and that the following resolutions be carried by this Association:

The addenda to this report consists of four formal motions and it is moved that the whole report be adopted.

Mover, F. E. BUCK,

Chairman of the Ottawa Committee.

Seconder, J. B. SPENCER,

Secretary of the Ottawa Committee.

A NATIONAL FLOWER FOR CANADA.

J. B. SPENCER, OTTAWA.

The suggestion that a national flower should be selected for Canada has been well received from coast to coast. Following the action of the Ontario Horticultural Association last year in accepting the proposition of the Ottawa Horticultural Society, the Ottawa Committee placed the matter before various institutions in every Province, including the universities, the agricultural colleges, teachers' organizations, and official botanists and florists. Most of those written to expressed their approval of the idea, and a large percentage succeeded in having the matter considered by their organizations. Comparatively few institutions, however, followed the subject to a conclusion, which goes to indicate that a subject of so great importance and on which wide differences of opinion exist, cannot be quickly disposed of. In some of the Provinces the question has been kept before the public through the press, and it is fair to assume that further systematic effort is needed to bring about the selection of a flower acceptable to the horticulturists of Canada.

As a result of the initial step taken by the Ottawa Committee, a large number of flowers have been mentioned as appropriate. Commencing in the east,

Mr. L. A. DeWolfe, Director of Rural Science Schools, speaking for Nova Scotia, suggests that some species of any one of the following flowers would be suitable: Lupine, Clover, Violet, Wild Rose, Kalmia, Mallow, Lily, and Great Willow Herb.

Mr. R. P. Graham, Instructor in Nature Study at the Fredericton, New Brunswick, Normal School, adopted the unique plan of taking a secret ballot from the pupil teachers representing the different counties in the Province. The total votes cast were 213, and all were in favor of the selection of a national flower. The leading flowers and votes received in their favor were as follows: Violet, 111; Buttercup, 32; Columbine, 16; Mayflower, 12.

Rev. Brother Leopold, Horticulturist at the Oka Agricultural Institute, makes a strong plea for the Painted Trillium, of which he says, there are few choicer flowers that adorn the woods and forests of Canada. He also says a good word for the *anemone canadensis*.

It was but natural that Toronto should take vigorous action in regard to this matter. Mr. R. B. Thompson, Professor of Botany of Toronto University, called a meeting of representatives from the various educational, artistic, and practical institutions of the city, especially to deal with the matter. After considering the subject from various standpoints, the Ottawa list, which was suggested at the last year's Convention, was taken up plant by plant and each considered inappropriate. The *Cornus Canadensis*, popularly known as the Dwarf Cornel, was considered a good choice for a national flower, but unfortunately not as widely known to the people as desirable. The Hepatica and Trillium were considered suitable flowers for Ontario Provincial emblems.

V. W. Jackson, Professor of Botany at the Manitoba Agricultural College, strongly favors the *aquilegia Canadensis*, which, he points out, responds well to horticultural treatment and makes a quick growth and a good showing.

The appeal of the Committee to the Manitoba Horticultural and Forestry Association resulted in the appointment of a Special Committee to deal with the matter. This Committee, after due consideration, recommended that the Columbine, or Aquilegia, be chosen, and defended their choice on the ground that the Columbine is native to many parts of Canada, and that it is capable of easy culture.

President Murray, of the University of Saskatchewan, looks forward to the happening of something that will give one flower a place in the thoughts of the people and it will then become naturally the national flower.

Mr. G. Fred McNalley, Principal of the Normal School at Camrose, Alberta, expressed the view of the students and staff that none of the flowers that they had seen suggested by the Ottawa Society was itself sufficiently characteristic to make a choice desirable.

During the year the question of a national flower has been kept before the readers of *The Agricultural Gazette*. This has drawn from individuals suggestions that are worthy of consideration. Mrs. E. L. Curry, of Port Hope, recommends the *sanguinaria Canadensis*. Its beautiful pure white flower and red sap renders it appropriate to decorate the graves of our fallen heroes in France and Flanders.

A correspondent from St. John, New Brunswick, who had observed Canadian boys in New Brunswick Depot Battalion growing Pansies in boxes in the windows of their building, suggested this plant as a suitable national emblem.

A claim for the Red Tiger Lily, *lilium philadelphicum*, has a strong exponent in a correspondent who signs himself R. McD., and contributes the following verses in its support:

The red, red Tiger Lily flaunts itself along the line,
 Its petals stand up bravely in the shadow, rain or shine,
 'Tis spotted like its namesake, or a dainty speckled trout,
 Where a tiny lip of honey from its heart is peeping out.
 As the troop trains speeding eastward, bore our boys away to fight,
 The red, red Tiger Lily from the windows met their sight;
 And one hero wrote his mother, from the trenches mud and gloom,
 Do not worry, dear, I'm coming back, when Tiger Lilies bloom.
 On a stricken field in Flanders—the land where poppies blow,
 I saw a hillside, a deeper crimson glow;
 'Twas the red, red Tiger Lily, planted by a comrade's hand,
 Where a gallant boy from Canada had made his final stand.
 His life is in the petals of that Tiger Lily red,
 Its cup is full of brown stains from the blood he bravely shed;
 Where they stopped the raging flood of Huns which swept across the Rhine,
 Like the lads from its dear homeland, it is holding down the line.
 You may tell of English roses, or the lilies fair of France,
 Of Scotland's hardy thistle, or the shamrock's green perchance,
 Maybe the violet's sweeter, or the primrose is more gay,
 But the red, red Tiger Lily stands for Canada to-day.

Another correspondent says a good word for the perennial aster, which is addressed in the following stanza:

O dainty little lady with your starry, purple eyes,
 The autumn day is calling me with rustlings and with sighs;
 In your royal gold and purple you are wonderfully fair,
 Among the swaying golden rod with sunlight in your hair.

Other flowers that have been recommended by individuals are the Trillium, the Lily of the Valley, and the Wild Rose.

A medical officer serving in an English military hospital, considers the Perennial Aster, Trillium, and Goldenrod, have each a real claim to consideration.

Of the flowers selected, the Columbine and the Trillium have been about equally popular; others that have received more or less support being, the Wild Rose, Violet, Aster, Buttercup, Tiger Lily, Anemone, Pansy, Goldenrod, Crocus, Lily of the Valley, Sanguinaria, Dwarf Cornel, Lily, Clover, Lupine, Kalmia, Mallow, and Great Willow Herb.

MR. BUCK suggested that the name of Miss Yates be added to the Committee on Judging Roses, Sweet Peas, Peonies and Spring Flowering Bulbs, to which the meeting agreed.

MR. GILCHRIST: The term "wild flowers" is not quite applicable, there was no such thing in a native plant, and if you brought these flowers into the garden they would soon be domesticated. Great strides had been made in decorating. This country and the United States were ahead of England in this respect, and we grow better roses inside than in England, though their outdoor product was better, as they had the climate.

A national flower for Canada should be a native of Canada, hardy, easily grown in the gardens of the common people.

It should be adapted to be grown on the graves of our fallen heroes in France and Flanders.

It should possess qualities as a cut flower, lasting well when cut; distinct in form and color, to be used in wreaths or garlands, heraldic and symbolic devices. From an extensive experience of our native flora, I would like to suggest our Canadian Lily of which we have three species, *Lilium Canadense* (common name) Yellow Canadian Lily flowering June and July, *Lilium Superbum* (common name) Turk's Cap (lily), flowering July and August, *Lilium Philadelphium* (common name) Orange Lily flowering June and July.

These lilies have been introduced into the gardens in the United States and England. William Robinson, founder and editor of the *Garden* speaks thus of lily superbum, "A very tall kind with slender stem and leaves and a profusion of flowers with from ten to forty blossoms on a stem." Edward Rand, Jr., author of "Seventy-five Flowers," speaks of it thus, "Lilium Canadense and Superbum two splendid species with drooping yellow and reddish-orange flowers. They are worthy of every care, for they are among the most graceful and beautiful of the family. We have had Lilium Superbum in our garden eight feet high with thirty flowers on a stalk and the groups when in bloom were magnificent." I have a group of Lilium Superbum in my garden planted about twelve inches deep and among them Trillium Grandiflora planted about six inches deep growing two crops of flowers in the same bed; my soil is a moist black sand. There is nothing better as a cut flower for they can be cut with long stems lasting more than a week after cutting and every bud opening to the very top.

Lilium Philadelphium was found in great abundance at one time near my home east of the Humber River on the dry sandy plain, but now nearly exterminated by fires and people pulling them up when in bloom. Very few are found now. It is more plentiful in the west but nearly exterminated in older Ontario. Flower erect, orange spotted with purple inside. This is the characteristic of our native lilies, a most charming native plant.

Lilium Canadense quite distinct from L. Superbum or L. Philadelphium: flowers vary from yellow to orange, bell shaped, heavily spotted inside with brown. very graceful and pretty. It likes plenty of moisture, and is found along river banks and streams. It produces quantities of flower when established in the garden.

The lily is a symbol of purity, and next in popularity to the rose. The lily sweet and modest has been entwined with the rose in heraldic emblems in ancient times. The United States in recent years have adopted thirty-eight State flowers, twenty-five by legislation enactment, the balance by popular vote. But they have still left us the lily, the pride of them all. There is no poor relation or weedy plants in the lily family. By some the lily has been regarded as queen of flowers. Lincus called the lily "the noblest of the flowering kingdom." Pliny remarks, "Lilium Nobilitatum."

The lilies high bespeak command,
A fair imperial flower,
She seemed designed for Flora's hand,
The sceptre of her power.

THE TRILLIUM—Natural order *Liliaceae*.

Common names, Wake Robin or Wood Lily.

This beautiful genus is exclusively a North America plant; all the species are low plants rising by a single stem from a tuberous root or creeping root stalk. All parts of the plant are in three the stem bearing a whorl of three leaves; and the solitary flower having three green sepals and three white petals. There are four varieties native to Canada and about eight varieties in America. Trillium grandiflorum is the finest of the genus, the flower vying in beauty with that of any spring blooming plant. No one who has seen a mass of this species in full bloom in the garden as we have grown it for years will wonder at our classing the Trillium among the choicest garden flowers. The three leaves on the stem represent the three nationalities, England, Ireland and Scotland as the

basis of the British Empire of which we form a part. The three sepals represent the trinity, the basis of our Christianity, the three pure white petals represent purity, truly a divine flower. What flower could be more appropriate for a national flower for this fair Province of Ontario. As a child of the Canadian wood I loved to pluck it and love it still, and it might justly be called Kipling's "Lady of the Snows."

Flower in the crannied wall,
I pluck you out of the crannies.
I hold you here, root and all, in my hand.
Little flower—but if I could understand
What you are, root and all, and all in all,
I should know what God and man is.—*Tennyson*.

The meeting then adjourned to visit the greenhouses of Sir Edmund Osler.

RETURNED SOLDIERS FOR THE SOIL AND THE SOIL OF CANADA FOR HER RETURNED SOLDIERS.

REV. A. H. SCOTT, M.A., D.D., F.R.H.S., PERTH.

One of the beautiful things tending to make life cheerier we have from two good friends of Horticulture, one of them a former President of our Ontario Horticultural Association. Mr. W. B. Burgoyne writes in his wife's name as well as his own, to the Mayor of his city: "The war was on, and it did not seem wise, even were I in a position to carry out my desires, to broach the matter at that time. . . . the war is now over, and we can begin to turn our thoughts more and more to matters of civic beautification, betterment, and beneficences."

This writing appeared on the first of February, just the other day; a day of the month in which we are holding our Thirteenth Horticultural Convention in Ontario. In the letter was an enclosure. The enclosure was a cheque. The value of the cheque was a thousand dollars. What for? A thousand dollars toward the establishment of a Civic Rose Garden in his native town.

Benedictions upon the donors! They have a son who is home from the war. Our friends have been together in business for forty years and they have a good many years belonging to the record before their particular business was begun. And our friends, well on in life, are thinking of gardens and of roses and they are furnishing the money to produce roses in these rose gardens.

I have a whiff at this moment from that rose garden that is yet to be. There is something from my friends' conception that does me good. The law of "Association of Ideas" comes into operation and helps to furnish soul for my sentences in this contribution to the Convention. A garden, a garden for roses, thought, purpose, the carrying out of purpose, mindfulness of others, pleasure for the many, something that will live on, sweet scent, aroma, etc., etc. The combination puts the membership of this Convention in good trim and incites good feeling. And that is the feeling that is becoming as we contribute part of an hour in the interest of those who are returning from the war. It is for the cultivation of that good spirit that we have this on our programme.

Closed eyes cannot see the white roses,
Cold hands cannot hold them you know:
Breath that is stilled cannot gather
The odours that sweet from them blow.
What to closed ears are kind sayings?
What to hushed heart is deep now?
Life is the time we can help them
So give them the flowers now.

You cannot touch the subject of the returned soldier without touching the subject of war. Wars have been, wars are yet to be, but the most horrible war in the annals of man is that from which our soldiers are returning. Not so long ago a part of the world settled down to nurse the delusion that man had reached such a pass by civilization that the days for war were over. But all the while what some men termed the acme of civilization was quietly and persistently preparing for war. A little less than five years ago the war was on. Because Great Britain became participator in this particular war Canada was voluntarily and necessarily in the war. When righteousness was to be defended this young country and the mother country must be together.



Path through the woods at Ennisclare.

"In peace there's nothing so becomes a man as modest stillness and humility, but when the blast of war flows in our ears then imitate the action of the tiger." This counsel of the immortal bard the soldiers from Canada followed. A mother in France had a son in Canada when war was declared in 1914. Joffre carried in his pocket a letter written by that mother a portion of which was as follows: "My dear boy, you will be grieved to learn that your two brothers have been killed. Their country needed them and they gave everything they had to save her. Your country needs you, and while I am not going to suggest that you return to fight for France, if you do not return at once never come." I am glad that three of my sons went to the war. I am glad that Canada sent so many brave soldiers to the war. One of the conquered near Mons, after the event of the eleventh of November, said to my youngest son, "We hate you

Canadians, but we are bound to acknowledge that you are terrific fighters." A General of the Imperial Army who had been in the thickest of the fight said in sincerity to an officer in the service. "These men from Canada are not only the most capable for attack among the forces of Great Britain, but their superiors in general warfare are not to be found in the whole of Europe." If there must be war, and soldiers must conduct war it is worth while pausing to reflect that our men who have gone to the war, some of them never to come back, some of them returned or else returning bear a name for having done valiantly. Whatever the returned men may do for themselves, and whatever we may be to them or do for them, it rings melodiously in my ear that two hemispheres speak proudly of the bravery and efficiency of the Canadian warrior.

Nor can you touch the subject of the returned soldier without red-lettering the fact of victory. You may not care to state your choice when certain theories are submitted for your consideration. There are at least three theories about the turn of events at the Marne. In connection with the first of the three the overwhelming forces of Germany when almost within the sight of Paris divided. The airmen signalled that there was a wide cleared space between the two divisions. The way was so cleared that some commander who would have the glory would pass through. Some one would repeat the victorious entrance into the French Capitol of the Franco-Prussian period. But that glory seemingly so near was yet so far away. The airmen and the defenders filled the gap and the glory turned another way. Another theory takes one over to Port Arthur in the days of the war between Russia and Japan. How came it that Port Arthur was so easily captured. Russian commanders were drunk when they should have been on the watch. So this second theory holds that when proper orders were not given at the Marne the troops became disorganized and explanation in the case is found in the percentage of intoxicants in the French vintage. A third theory takes you back to the days when the Spanish Armada was destroyed. Prospects bade fair for the invasion of England. But the winds and the waves wrought wreckage, and thoughtful men have found the explanation of the turn in the tide of war to lie in the interposition of God.

Wheresoever lies the correctness of interpretation at the Marne the fact is there that our victory was begun almost as soon as the war was begun. True, it looked as if Calais would be reached, but by British acknowledgment the Canadians "saved the situation," and all the while from the time of the retreat at the Marne until the time that the last cracks of Canada's men were administered at Mons the war shaped for the end that the victors chronicle. Had the war gone otherwise where would Canada be to-day? Because the God of Battles would have it as it is we in Canada have something welcome and something to purpose with the warriors' return.

But have we pondered the significance of this: "Nothing except a battle lost can be half so melancholy as a battle won."

The world's situation to-day is a sacred and serious situation. From one viewpoint they may be right who maintain that it would have been better had the war continued a fortnight longer. It does not belong to us, here and now, to pronounce upon this. But tidings from Versailles together with conditions in Europe, to say nothing of our own and other continents reveal the facts that give occasion for concern to all thoughtful men.

The getting back of millions of men from the scenes of the late war creates questions and problems the exact like of which no past generations have been called upon to face. Canada never until now had the matters to deal with that

have come upon her programme with the return of the soldier, the sailor, the aviator, the nurse and the kindred that is part and parcel of the homebound hosts. If these were alone—but you must think of those others, the quality as well as the quantity of them, that have an eye upon Canada to-day. Canada was never so advertised as she is now. There is a mongrel crowd hanging on to those now returning to this Dominion that if unwatched will do more harm here than the “mixed multitude” that followed the Israelites when they departed from Egypt for the promised land.

Our returning soldiers are taught to fight shy of the big centres. The authorities are planning to lead them home by another way. There are men overseas who know something about this great half of North America, men, and women, too, who are now bidding a fond farewell to the Canadian contingents that have done so grandly and they have expectations for the future of the returned soldiers. They look across the great waters and they behold this Canada of ours as young and new, a land of lakes and rivers, an expanse of fields and gardens, a western world of promise. Some of these well-wishers in the old land, men of the greatest sanity who feel the responsibility of the times most keenly are telling of this land to thousands who have never been here with a view to the occupation of our unused acres.

I know very well that the soil is not the sole occupation of man. The city, the town, and the village have their honorable place in preparing a people who are here for a few short years for a better place beyond. But just at this pass it seems to be given to us who understand the soil to speak its merits where we are wishing the best for our returned and returning men.

As far as I am able to interpret the situation the deep-seated longing of those who have been at the war is to get home. Home has more in it to them than ever before. In anticipating what lies before them they crave for a set of surroundings that will cause them to feel the reality of a home. Some of us are concerned about the soldiers' trend when they come back to Canada.

One ship drives east, and another west,
With the self-same winds that blow;
'Tis the set of the sails, and not the gales,
Which decides the way they go.

Hence the earnestness that would have decision in the way that would lead to the place where the soldier would have the best home after his experiences without home.

Just here, then, scope is furnished for the proclamation of good tidings concerning the returned soldiers for the soil and the soil of Canada for her returned soldiers. “The home is the basic foundation upon which must depend the stability of good government, and the broadest liberty consistent with the best welfare of society.” The movement of population toward the soil means for vast numbers enhanced opportunity for the blessings that centre in the name and reality of home.

There is no such home-making institution in the world as the country when the people who are there honor God and revere citizenship. It is the hollowest kind of mockery that pictures the city as the place where “all are wealthy and where the wealthy have all the attractions.” The truth is that they are not all wealthy in the big centre, and the wealthiest and the best in the city have chief attractions in the country. It is not only because they can raise grain and cattle and vegetables and fruit there, but it is mainly because in their gardens and on their wider areas they may raise “the expectation of life.”

In too many places they are dying young and they are dying poor. Too great a portion of this generation is become insane actually and metamorphically. Young Canada through her Governments, Legislatures and organizations should by this time be acquainted with the fact that "philanthropy is heavily taxed to meet the increasing demands of dependency." Prevention is better than cure. And the soil is given so that in an understandable sense, it may be a saviour to us and our children and our returned soldiers.

When I look about me and witness in so many places the eternal grind, and the vanity of so great a part of it, I wish for a thing that Xenophon wrote about long centuries ago—for that understanding of the soil which will prove to him or them that work it that it is profitable. I wish for many an appreciation of that portion of Emerson's creed which runs, "I believe in a spade and an acre of good ground. Who so cuts a straight path to his own living by the help of God in the sun and rain and sprouting grain, seems to me an universal working man."

The grand fleet was a spectacle in the North Sea when its command was invincible in stillness. It was a spectacle again at the time of "the surrender." But "the finest fleet that ever sailed in any country is the fleet of plows, tractors, harrows, seeders, etc., that will shortly put out into the fields. God speed this fleet! It goes out in peace, it battles for human happiness."

Whatever else they may have when they get back from the war I wish for our returned heroes that they may have neither poverty nor riches, but food convenient for them. I wish for them a personal interest in the place where the fish bite, and that other place where the cabbage grows. I wish for the soldier a home where wife will have good things to cook from her own garden, where the children can have a swing and a see-saw on their own ground, where the morning sun can shine into a well-ventilated room through a good sized window and where, when evening comes father and mother and family may surround the altar and examine the message from God's own word.

Secure for the returned soldier the right conception of the soil and you have gone a long way toward the best thing that you offer the returned soldier. Regarded in the more general way of agriculture or considered under the more intensive term of horticulture the soil is the most engaging of the occupations of man.

It is the oldest of the world's occupations. "Adam was a gardener, Cain was a farmer, Abel a herdsman; and Cain did not go to live in a city or to build one until after he had committed his great crime."

Not only is it the most historic, but it is also the most necessary. All other pursuits could be more readily spared than this one. The man on the soil who looks intelligently to his calling finds himself in an environment both dignified and profitable, and he is engaged in a work that gives stability to every other industry and pursuit.

All kinds of inventions are consecrated to the soil. "The products of the mine, the forest, the quarry, the hammer, forge, saw and engine have been pressed into its service. How many kinds of toilers and artisans have brought their inventions and labor to make tilling the ground profitable?"

More than that, how many sciences wait reverently upon husbandry. "For it Geology ransacks the bowels of the earth; Chemistry proclaims what nutriment certain plants absorb from soil and what enrichment certain alkalis will give; Botany collects the varied grasses to make possible the permanent pasture on the principle of the survival of the fittest; Astronomy smiles on it and causes

the sun to do more for its prosperity than any thing however gracious and the clouds more than any landlord however beneficent."

So there is the inviting field. One-third of the British Empire lies here in Canada and perhaps no portion of it has greater attractions for those who weigh considerations well than the portion that is ours in fair Ontario. It is highly becoming that we who have watched the proceedings across the sea, for the last four years and a half, should give the Canadian soldier a warm welcome home. Along with that welcome we should enhance the attractiveness of our Canadian home-land for our returning men, and for all who set their feet this way, by adherence to and proclamation of that righteousness that exalteth a nation.

When our representatives at the war come back, and take time to think things out, I am sure they will be led to mourn for the comrades left behind. And there will not be wanting a company here to sympathize with them as we reflect upon the marked graves in France's and Flanders' fields. The unmarked spots, too, in no man's land, the sleeping places at the bottom of the sea, and the new made resting places in Canadian cemeteries will tell of the ravages of death. It will fall to us to furnish a word of comfort and uplift by emphasizing our faith in Resurrection and by witnessing anew our confidence in the risen and returning Christ. Of course, by the farthest reach, we good men and women of Canada have in view the coming glory yonder for all who have "well done." But it is worth while for soldier, civilian and all the rest of us to keep in mind the golden age that is preparing for this old earth of ours, and to live lives of hope, and comradeship and exalted ambition "until the day break and the shadows flee away."

WHAT IS BEING DONE FOR RETURNED SOLDIERS.

HON. W. D. MCPHERSON, PROVINCIAL SECRETARY.

After briefly giving a resume of the duties and responsibilities which had devolved upon the Department of Militia before the Military Service Act was passed in securing recruits, Mr. McPherson went on to say:

A meeting of the Prime Ministers of the various Provinces was held in Ottawa in order to devise ways and means of taking care of the returned man. That resulted in the formation of what is known as the Military Hospitals' Commission. Many of the returned men required hospital treatment before they could be returned to civil life, and a series of hospital buildings were procured and staffed, as well as they could be, because the demands of the war had not only taken away large quantities of able bodied men, but they had also made enormous inroads upon the medical profession and the nursing sisters, so that it was no easy matter either to equip the hospital buildings or staff them with doctors and nurses.

However, when matters became somewhat more systematized, a splendid chain of military hospitals was inaugurated between the Atlantic and Pacific, and the result was that each Provincial Prime Minister returned to his seat of Government pledged to organize a Commission to aid in the work of looking after the men of that Province brought home, for military hospital purposes, and likewise from the standpoint of employment after they became discharged from military service.

The Premier of Ontario sent for me, and asked me to undertake the formation of our Provincial Commission, which I very gladly did and which was called

the Soldiers' Aid Commission. A similar Commission was launched in each of the Provinces. We who were charged with the executive duties of the work in its different phases have had a number of conferences together.

Up to the present time we have received from overseas approximately 38,000, and some odd. These men have come from all over Ontario. Of course, the large cities furnished a very much larger number of men proportionately than the smaller ones and the country places; but, at the same time, many men who enlisted from cities really had their homes at some little distance from the city. They were not necessarily city men, although they came in and enlisted in a city regiment. So that the question of distribution of the returned man has been something that we have had to pay very close attention to. It has been a big proposition. As the men come to the home seaport, their documents are all



Pæony Monsieur Ronselon (20 inches in circumference).

prepared, and a sheet which is prepared on shipboard is made out in three copies—one of them remains at the depot of debarkation, and the other two are sent to the headquarters at Ottawa. One is retained and the other is sent to the Province for which the man is destined. From that sheet we receive all the information about the man. We get to know his name, his regimental number, his home address, what his pre-war occupation was, whether he is a married man, and if so, what family he has, where they are residing and how they have been maintained. If he is sent home for hospital purposes, of course, he remains in the charge of what is known now as the Invalided Hospitals' Commission, the organization of the Federal Branch has been known as the Soldiers Civil Re-establishment, which is divided into two heads—the Pension Department and the Invalided Soldiers' Commission. The Invalided Soldiers' Commission has charge of the men who require hospital treatment to a limited extent prior to their discharge. As I stated to you, the duties of the Militia and Defence Department originally were very largely taken up with the procuring of men and sending them overseas. When that work was finished their duties were so much lightened

in that respect that they were able to resume their normal function of looking after the undischarged man who came back for hospital treatment, and by arrangement with the Army Medical Corps this division was made of the men.

There was the class of men who require hospital treatment by reason of having been wounded or suffered the loss of an arm, a leg or some other member, or who have been shell shocked or something of that kind, and they go into the hospital for such time as may be required. There are, however, three sets of men who do not fall to the lot of the Army Medical Corps.

These are the soldiers who have become insane by reason of the perils to which they have been exposed. There are also men who have acquired tuberculosis for the same reason; and there are men who by reason of the loss of an arm or a leg or something of that kind are unfitted hereafter for carrying on the particular trade or occupation in which they had been employed before they went overseas.

Now those three series of men—the insane, tubercular and those who require vocational training, in order to fit them for some other occupation, come under the Invalided Soldiers' Commission. All other men who require hospital treatment come under the charge of the Army Medical Corps until they are discharged from the service. When they are discharged they come under the Soldiers' Aid Commission or the Invalided Soldiers' Commission.

As soon as the returned man comes to Canada our first duty is to get in touch with him. We do that by sending a letter to him either at the hospital where he may be for treatment for the time being or to his home, if he has been allowed to leave hospital long enough to go home. We send him what is called a welcoming letter, advising him of the provision which has been made by the Government for looking after his welfare, tell him where our offices are, offering our services in any way in which he may see fit to utilize them.

Soon after the returned men began to come back arrangements were made between the Military Hospitals Commission and the Soldiers' Aid Commission, whereby we undertook the training of the men, giving them vocational training in our own Province. The reason for that was that we have perhaps in the Province of Ontario the best equipped educational system of the whole Dominion of Canada. We have not only the public and separate schools, but our secondary educational institutions, collegiate institutions and the university, and an excellent system of technical schools, so that if satisfactory arrangements could be made all these various institutions could be properly utilized. And an arrangement was entered into between our Provincial Commission and the Federal Commission whereby we undertook the training of the Ontario men in the Province of Ontario.

For a man to receive a course of training in the schools, he puts in his application to the Invalided Soldiers' Commission. He is examined and his application is then referred to the Disabled Soldiers' Training Board. They meet the man and find out from him what his aims and hopes are, ascertain what preliminary education he has had and what he would probably be best fitted for, taking into account the casualties that he has sustained. In almost every case the particular injury which the man has sustained has to be taken into account. This Disabled Soldiers' Training Board then award to the man a course of training of six, eight, ten or twelve months, whatever they think may be required in order to fit him out so that he may be able to earn his living and carry on. After that award is confirmed at Ottawa, as they usually are without any delay or difficulty, then he passes over to the Vocational Superintendent connected with the Soldiers' Aid Commission and is placed in some of the classes in whatever part of the Province happens to be best suited for his requirements.

We have now in the Province of Ontario 146 branches. We have started out to organize a branch of the Soldiers' Aid Commission in every town and every village where there are at least five returned soldiers. If there are five returned soldiers—some of them or most of them may be married—then the responsibility represents as many wives and children as there may be. These would require the attention of the local Commission. We have been very fortunate indeed in being able to interest in our work the ladies and gentlemen in the various localities who had previously been connected with the Patriotic Fund, the Red Cross Fund, and so on.

The Province for military purposes was divided into three districts, the Eastern District No. 1, with Kingston as headquarters; the Central Ontario District No. 2, with military headquarters at Toronto; and the Western District, No. 3, with London as headquarters. We have followed in our organization the same principle, and we have an inspector of branches in each of these military districts whose duty it is to visit each of these villages forming branches where required, and inspect and encourage those who have already undertaken the work.

The distribution, as I have said, of soldiers is a very important question. Large numbers come from the city, but there is now hardly a hamlet in the Province of Ontario in which there are not some of the 38,000 returned. A very large proportion of them have fixed places of habitation. They were either living at home with their parents when they enlisted or they were men who had already embarked on the venture of life and had a wife and child, and the wife did not make any change in her locality after the husband went overseas. So that when they come back and have finished their course of hospital treatment, they, of course, want to go back to their families. That makes it necessary for us to have a widespread organization. The Government is at the expense practically of maintaining the entire organization as far as salaried officers are concerned. In some of the smaller places we have voluntary workers altogether. In the larger places, while we have the regular Board, yet it is necessary to have a paid secretary on account of a good deal of correspondence that is going on and offices have to be opened where some person can be in attendance every day in order to receive the returned soldiers or their wives or children as the case may be, in connection with the business of the Commission.

Upwards of \$150,000 have already been expended by the Province in regard to these particular services and the amount is constantly growing. The men, since the armistice was signed, are coming back in very much larger numbers and, consequently, we have almost reached the peak which our organization will be called upon to bear.

The feeling and sympathy displayed toward the employment of returned soldiers has been excellent throughout the country. Up to the time peace was declared very little difficulty was encountered in securing employment—general public feeling was very kind toward the returned man, although a man might perhaps not be as efficient as someone else who applied for the position. But coincident with the signing of the armistice the making of munitions ceased. There were between 500,000 and 600,000 munition workers in various parts of Canada and when those factories closed down those employees were thrown into the labor market and came in competition with the returned soldiers for such positions as there might be. So that since the beginning of November our duties have grown enormously and the difficulties are very much greater.

The remedy arrived at for those difficulties are as follows: The Federal Labor Bureau, in co-operation with our own Provincial Labor Bureau, have made

this arrangement: It was recognized that the duty of finding employment for the returned man devolved upon the Federal Government. It was they who in the discharge of their duties under the Militia Act, invited the men to enlist. They got them to leave what were in many cases lucrative employments, to go overseas. It was very important indeed that responsibility should be fixed in some way upon some particular body who would acknowledge that responsibility, for procuring employment for the returned man. Consequently, the Federal Labor Bureau have undertaken that branch of the work, which means the soliciting of manufacturers and employers all over the Dominion, not only in regard to employment for the returned man but likewise for the civilian population who require employment. It now has become a question of finding employment not only for the returned soldier but also for the civilian people who are looking for employment. The Province of Ontario has been divided into ten zones. The head office is at the City of Toronto and is staffed by an official from the Provincial Labor Bureau and a representative of the Soldiers' Civil Re-establishment who is there to receive returned soldiers each day, and see that they receive the preference where there are any vacancies. That is working along very well, but, of course, the state of the market, so far as the labor market is concerned, is not very well settled yet. A good many factories which were engaged in the making of munitions have not steadied down to ordinary peace conditions and it will probably be two or three months before everything settles down. I feel confident from my knowledge of the splendid efforts that are being put forward both by the Federal Government and the Provincial Government, that it will be a very short time only before matters are straightened out and we will be able to cope with the situation, particularly in view of the anticipated movement of new arrangements of one kind and another which will be required to be undertaken to meet public demand.

Now, in regard to Vocational Training: We have about 80 classes in the Province of Ontario—a number of them in the City of Toronto, Hamilton, London, Brantford, Stratford, Windsor, Sarnia, Collingwood, Peterboro, Kingston, Ottawa, practically all over the Province, and the men have, of course, to be dealt with carefully—a man who is only convalescent in health cannot be expected to take regular school hours. But we have to do the best we can and deal with each case on its own individual merits. So far we have about 1,500 in our various classes, with men who have already passed through our classes numbering approximately 2,500, so that about 4,000 of the 38,000 that have returned have received assistance through the Vocational Training Classes. The Federal Government bears the expense of the staff and paying of teachers who are imparting this instruction to the returned men, and special efforts are made as soon as a man has finished his course in vocational training, to get him into a position where he will receive lucrative employment such as his physical ailments will permit him to carry on. I am very glad indeed to be able to inform you that with comparatively few exceptions the men who have received vocational training are now in a position to carry on and are quite comfortable.

During the time that the men are receiving vocational training they are continued on "pay and allowance" on a scale slightly better than that received when they were overseas. As I dare say most of you know, when a soldier was overseas, there was what was called a Separation Allowance for the wife, in addition to a certain portion of his assigned pay. And where there were children under the age of sixteen years allowance was made for them also. There was also provision made for the wife and children from the Patriotic Fund. So that

I think all in all the system we worked out in Canada provided for the carrying on of the soldiers' families in a very comfortable way. While the man is taking vocational training, the pay and allowances go on just the same. If he comes from a part of the country where there is no class in the particular subject in which he requires his instruction, his travelling expenses are paid to wherever there is a class, and if he desires to have his wife accompany him, and his family, their transportation is also paid and allowances are continued to the wife and family until the man is ready to go on with employment. In addition to that he also receives the pension he is entitled to.

That will give you in a summarized form what is being done in Ontario for our returned soldiers. Excellent committees exist in all the cities and in all towns and villages to look after them and are doing everything that can possibly be done. We have heavy correspondence with the branches and likewise with the head office every day. We have a staff at our head office here on College Street of about 25 and so strenuous has the work been for some time past that we not only have to have a day staff of 25 but for some time we have been working a night staff of 25 also, in order to keep pace with our work. The work is pretty well up-to-date, and with the exception of the somewhat slight unemployment that exists since war ceased everything is carrying on very well.

There was inaugurated in Toronto a new movement to try to stimulate public opinion in regard to the returned man, not only to see that the returned soldiers receive a preference where there is a chance to give him one, but likewise to see that the personal touch was a little more in evidence than the Government institutions have been able to give him. We cannot do too much for the men who were our magnificent representatives on the battle front. And the attendance at that public meeting, very largely attended by some of the most representative business and commercial men of the city, was of a most encouraging nature. I hope and trust the same feeling will be evidenced in other cities, so that nothing will be left undone for the returned men.

Now, as far as the children of returned men are concerned, we have also made special provision for them. It became apparent some time ago that many of the men who had paid the supreme sacrifice in France had left widows and children in the Province of Ontario. During the recent influenza epidemic some of the mothers unfortunately died and we were left with a number of orphan children on our hands for whom immediate shelter must be provided. As you know, we have the system in the Province of Ontario, of the Children's Aid Society. The Province is very well organized in that regard, but primarily they have to do rather more with neglected and deserted children. But the Government felt that something better should be forthcoming for the children of returned soldiers and those overseas. So we formed what was called the Children's Hostel in the City of Toronto, and we purpose extending that to other places as rapidly as we are advised by our various branches that there is any occasion for it. Only to-day we admitted six children from one family from Creighton Mines. The father was a returned soldier who was engaged as a miner in the nickel fields and the mother became demented. She was unable to look after her children, and I received a telegram from Sudbury advising me of the circumstances, and we immediately made arrangements to bring the father to the hospital, brought the mother to Toronto and placed her in the Reception Hospital where she will receive the very best of treatment, and the six children were admitted to the hostel. The hostel is not carried on as a charity. It is merely a place where the children may be excellently looked after, where they

may have all home comforts but they pay their way, and the way that is done is as follows: As I told you a little while ago, the Pension Department makes provision for the payment of pensions. If the father is killed a certain pension goes to the mother and so much for each child. If the mother dies then the pension is continued for the children, and we have perfected arrangements with the Federal authorities whereby the monies to which the children are entitled are paid over to the Soldiers' Aid Commission and we administer those funds for the children. The Government pays all overhead expenses, we provide the building, we equip and furnish it, provide it with a superintendent who is a trained nurse and staff it with the necessary cooks, housemaids, assistant superintendents and so on, in order to give it a perfect staff. The children, where they are old enough, go to school; those who are younger have a kindergarten in the house for them, and I can assure you that kind-hearted people of the City of Toronto, through the Rotary Club, and other organizations, do everything possible to make these children's lives happy and useful. Many times when the children come to us they have been sadly neglected. It is perfectly pitiful sometimes to see these poor little things and the condition they are in. But they are not very long under the superintendence of Miss Wardlaw until you would not know them from the children of the best families in the land. And it is perfectly joyful in a way to see how well the children respond to the treatment. The other day we had three children leave us who had been with us three or four months (and they had had rather a hard time before) the father having in the meantime got home, and as his home was broken up by his wife's death he resolved to go back to the old country from whence he came. The children were very loath to go. We have had about 25 or 30 who have left us during the past month or six weeks who have been adopted by various relatives or other friends of the family after arrangements had been perfected, and we take the utmost care to see that they go into homes where they will receive every possible advantage, the aim being that the future position of the child shall be not only as good as it would have been if their parents had been alive but better, if possible. We are open to suggestions, and we are only too glad to have the assistance and co-operation of the public in every way. So far we have had that to an excellent degree, and we sincerely trust that the friendly feeling which has been in evidence to so great an extent in all parts of the country up to the present time will continue until the scars of war are healed.

W. B. BURGOYNE: We have to-night been honored by the address which the Hon. Mr. McPherson has just delivered. It has been a revelation to us to learn of the wide ramification of his Department. We can assure him that it is scarcely possible for them to do too much for the returned soldiers. I have pleasure in moving a hearty vote of thanks to Hon. Mr. McPherson for his splendid address.

THE HOME GARDEN BRIGADE.

C. A. HESSON, ST. CATHARINES.

This was a new venture with the Society. I do not know if any one has had any experience along these same lines. So far, the matter has been solely in my hands, and therefore the responsibility for any shortcomings is at my door. I have learned through experience from other years that there are possibilities in the way

of improvement, and I would like to see some of the Societies work along the same lines if they see fit during the coming year, and ultimately it may redound to the benefit of all Societies.

1. Our motive is to have the children form the habit of Industry—of being busy at something that will be useful and keep them occupied. Gardening opens a field of Nature-study that is ideal, furnishing material for the very best kind of school work. Three-fourths of the children will, on leaving school, seek employment with their hands. How much better workmen they will become should they have acquired the habit of doing their part well. Nature-study through the garden, Manual Training and Domestic Science are subjects of vast importance tending to efficiency.

2. The number of members and consequent gardens established in connection with each school in the city is as follows:



Community Garden, organized by St. Thomas Horticultural Society,
14 plots, 175 x 50 feet.

Alexander School	374	Victoria	137
Connaught and St. Paul's	164	St. Mary's	43
St. George's	74	St. Nicholas	39
St. Andrew's	70	St. Catherine's	49
Central	94	St. Thomas	40
		Total	1.084

3. The estimated quantity of vegetables produced by these gardens is as follows:

Squash—3,794, or an average of 3.5 squash per garden.
Beets—12,357 feet, an average of 11.4 ft. per garden.
Parsnips—11,598 feet, an average of 10.7 ft. per garden.
Carrots—11,598 feet, an average of 10.7 ft. per garden.

Making a total of nineteen tons of squash (estimated) and a row of the other vegetables, were they placed one after the other, of six and three quarter miles.

It was not possible to arrive at the weight of the under-ground vegetables, but the schools reported the number of feet in the rows grown—the homes were of course using the vegetables, from the first possible moment, and so much so was this the case, that when exhibition time came around some children reported no vegetables left to show. It will be remembered in this connection that each child's application for membership had to be approved of by the parent, and that approval seems to have been extended to the results of the children's efforts, even though it caused disappointment to the children at exhibition time.

4. The following expenditures were incurred, toward which the children contributed, at 10 cents per head, for the four packets of seed, making the actual charge upon the Society as under:

The Wm. Rennie Co., 6,000 special packets seed	\$150 25
<i>The Standard</i> , printing, etc.	69 60
Thos. Wibby, brigade buttons	29 25
Roden Bros., shields	15 90
Bank of Toronto, savings bank books	20 00
Cash paid as prizes	28 00
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Less cash contributed by children	\$108 40
Less value of seeds on hand	37 50
<hr/>	
	145 90
<hr/>	
Net cost of Brigade to the Society	\$167 10

The exhibitions held on the afternoon of Wednesday, Sept. 11th, in the several schools were undoubtedly a revelation, the teachers and members of Committees entered whole-heartedly into the work, producing according to the varied accommodation of the school buildings, displays which were invariably pleasing and valuable as evidence of what the Brigade had accomplished. Some of the buildings lent themselves more satisfactorily to this feature, notably Alexandra, Victoria and Connaught, all large and new buildings, but while the displays here were outstanding ones, the others held up to the high standard when allowance was made for the handicap in surroundings and opportunity.

The Chairman cannot but express his appreciation of the interested manifested and labor extended by the various committees, as also of the assistance given by the judges in awarding the prizes under stress of time available and enormous amount of exhibits to be gone over. As an example of what this means, I may say that at one school there were 426 entries made and set up.

The competition for the Trophy Shields which took place at the Society's annual September Exhibition introduces a new and surprising feature, which I feel sure the Society will be desirous of repeating. The children not only sent their vegetables but further evidenced their interest, by attending on the afternoon of Friday, September 13th, to the number of 1,058.

The experience gained this year should be taken advantage of, having proved that the venture was very much worth while.

The circular, "About Home Gardens 1918" was sent through the schools addressed to the parents. We charged the children for the seed at the same rate they paid for it, as they realized in St. Catharines that something gotten for nothing was not valued.

In this way, the children had to go to the parents. And we had the evidence of the parents' interest. Now I went to the School Teachers Association early in the season and I was fortunate in finding there the Chairman of the School Board and several members of the Board, and I struck while the iron was hot. After

saying a few words to them I got the Association to appoint two members of the teaching staff in each school as part of a Committee, and then I went to the Society and I asked the Society to provide one member who was in close contact with that school, to form the third member of this Committee. I got my committees immediately, and I might say they worked well, and, from the chairman down, we got the teachers and the members of the Society in close contact with the schools.

Then we followed up with a card which is divided into two parts. The first is application of the child for membership in the Home Garden Brigade. He then takes it home to his parent and the parent signs his approval. On the return of that to the teacher, the teacher, or a member of the committee, issues to the child a certificate of membership. The parents are asked in the circular to put that card up in a prominent part of the home so that it can't be missed.

On the front of the card is a statement of the cash prizes. There are 16 cash prizes in each school. One prize was a Savings Bank Book of \$2. Now those savings bank books I followed up in the Bank, and everyone of them stuck. The only change in them to-day is that one child who was in the Penny Savings Bank or something of a similar nature, had it transferred to that account. These little accounts teach children to take care of what they do get. The proposition is to extend that feature through the coming year and also the cash prizes and to issue certificates of merit.

A success of this can be made anywhere provided the child is given a chance to feel that he is in the game.

Silver and bronze shields were then obtained and we started a competition between the teachers. We had the ten schools exhibition on one day, the next we had our Societies' exhibitions and we put up these children's for competition. The teachers were supposed to set these exhibits up from the vegetables grown by their pupils. We had the teachers tied down to further interest up to the last minute and it was interesting to see how they lack in the proper knowledge of the setting up of an exhibit. There were tons of stuff. But they learned something and the teachers are interested for next year. And so we lead them on. The first thing we know we will have the teaching staff enthusiastic where before we did not have them interested.

MR. MCKAY: Is the Committee prepared to know definitely whether the children accomplished all the work in their own gardens with their own hands?

C. A. HESSON: No. You will understand this was a new venture, and that is one of the points which is worth considering in another year's work.

MR. MCKAY: Is the Committee prepared to state definitely that all the exhibits by the children were the children's production?

C. A. HESSON: Yes. We had a member of our Society in close touch with the district, and he or she was expected to see that those exhibits that were brought there were from those children's gardens.

The Treasurer's Financial Statement will be found on page 6.

RESOLUTIONS.

The following resolutions were carried unanimously.

"This Convention submits that, in connection with the adoption of a national and provincial flower, it would be desirable for the federal and provincial Departments of Agriculture, through the Experimental Farms, Stations and Agricultural Colleges, to direct that at each such centre a collection of most of the principal native Canadian wild flowers be established for the purpose of enlightening Cana-

dians and visitors from abroad on the riches of Canada's flora, and for the secondary purpose of stimulating an interest in the making of brighter and more beautiful Canadian homes."

"It is moved that this Convention being desirous of obtaining the support of the Dominion Government to obtain a national flower for Canada, earnestly make request for support through the Minister of Agriculture, and suggests that one phase of it should take the form of a small grant from the funds provided by the Agricultural Instruction Act. Such grant to be used as directed by the Minister of Agriculture in consultation with the Ottawa Committee."

"It is moved that the Secretary of the Ontario Horticultural Association notify all Horticultural Societies in the province that this Convention considers it desirable that each Society should take practical interest in the work of obtaining a national flower for Canada and a provincial flower for Ontario."

"That the Ottawa Committee be instructed to take steps to ascertain to what extent the Maple Leaf is now officially recognized in National or Provincial designs, or as an emblem. And that, should it be thought desirable to pursue the subject further, a suitable design of one distinct species, or a combination of several species, be made, and that collaborative work be undertaken to get such design officially adopted for Canada."

Moved by MR. BUCK, Seconded by MR. TAYLOR, "That this Convention of delegates from the Horticultural Societies of the Province places itself on record as being in favor of the establishment of Children's Peace Parks throughout the cities and towns of the Dominion as War Memorial Parks, and advises all Horticultural Societies throughout the Dominion to do all in their power to forward the movement." Carried.

CANADA'S NATIONAL FLOWER.

A. GILCHRIST, TORONTO.

This is a subject which has interested me for a quarter of a century. Mrs. Gilchrist wrote an article on the subject which was much discussed twenty-five years ago. She then gave the Trillium as a suitable flower. Since then our decorations have changed. We are using flowers more for the table and for decorating rooms. We want longer flowers. I know most of the native flowers of this province. They can nearly all be transplanted into our gardens and do well. This list (hereto attached) was published by the Government about 16 years ago. The Department of Agriculture asked me to go out and talk to the people to surround their homes with our native perennials and shrubs. We can never make parks satisfactory to our country by using foreign shrubs and foreign trees. The most of our native shrubs and trees are free from insects, adapted to our outdoor climate, and they are as beautiful as those grown anywhere. We have thirty odd flowers which would do for a national flower. The one I would suggest is the Khaki Lily—that is a new name for an old flower. It has been called the *Lilium Canadense*, *Philadelphicum* and *Superbum*. There are very few of these left around my home. There used to be thousands of the *Philadelphicum* there. Whenever people see it in the woods it is pulled up and taken away. The people at the present time do not know the Khaki Lily. The Lily stands next to the Rose as a beautiful flower. It has no poor relations.

Its qualifications are as follows: It is native; it is perfectly hardy. It has a beautiful color, nearer khaki than anything else.

I come to its peculiar distinctive quality—when it is cut it will last for weeks, if you cut it with long stems it will last for two or three weeks. It comes in July and August, about our Dominion Day. It can be used for the national holiday at that time, for decoration at that time. Take a single bloom and put it through the centre of the maple leaf and you have the two combined—the maple leaf and the Khaki Lily. It is easily propagated, it multiplies rapidly. It will grow in any part of the Dominion of Canada. It grows well in Europe. You can take it and plant it next spring on the graves of our brave heroes. It will grow, the *superbum* about 4 or 5 feet tall, the *Philadelphicum* about 2 or 3 feet. It grows on moist land, along our river bottoms, we find it on our alluvial land. On the light land around Toronto it grows well. So these lilies could be produced on any kind of soil.

NATIVE HERBACEOUS PLANTS.

That will transplant well.

- Columbine (*Aquilegia Canadensis*).
- Liver-leaf (*Hepatica tribola and auctiloba*).
- Bloodroot (*Sanguinaria Canadensis*).
- Cardinal flower (*Lobelia cardinalis and syphilitica*).
- Harebell (*Campanula rotundifolia*).
- The Lily Family (*Lilium Canadense, Philadelphicum, and Khaki Lily (superbum—Turk's Cap Lily)*).
- Phlox (*Phlox divaricata*).
- Wake-Robin (*Trillium grandifolium and erectum*).
- Solomon's Seal (*Polygonatum biflorum and giganteum*).
- Dog's Tooth Violet (*Erythronium Americanum*).
- Spurge (*Euphorbia corollata*).
- Butterfly-Weed (*Asclepia incarnata and tuberosa*).
- Wind Flower (*Anemona nemorosa, Virginiana and Pennsylvanica*).
- Meadow-Rue (*Thalictrum dioicum and Cornuti*).
- Sneeze-Weed (*Helenium autumnale*).
- Cone Flower, purple and yellow (*Rudbeckia laciniata and hirta*).
- Sun-Flower (*Helianthus divaricatus*).
- Beard-Tongue (*Pentstemon*).
- Mayflower-Ground Laurel (*Epidaea repens*).
- Squirrel Corn (*Dicentra Canadensis*).
- Dutchman's Breeches (*Dicentra cucullaria*).
- Violets (*Viola cucullata, pubescens and Canadensis*).
- Lupine (*Lupinus perennis*).
- Geranium Cranesbill (*Geranium maculatum, Robertianum—Herb. Robert*).
- Wood Sorrel (*Oralis acetosella and stricta*).
- New Jersey Tea (*Ceanothus Americanus*).
- Saxifrage (*Saxifragea Virginiensis*).
- Blazing-Star (*Liastris spicata and cylindrica*).
- White Snake-root (*Eupatorium ageratoides*).
- Elecampane (*Inula Helenium*).
- Golden Rod (*Solidago Canadensis*).
- Starwort (*Aster multiflorus and Novae-Angliae*).
- Oswego Tea, Horse Mint (*Monarda didyma*).
- Wood Betony (*Pedicularis Canadensis*).
- Waterleaf (*Hydrophyllum Canadensis*).
- Dogbane (*Apocynum androsac, ifolium*).
- Skunk Cabbage (*Symplocarpus foetidus*).
- Bellwort (*Uvularia grandifolia*).

MR. SIMPSON: As a member of the Ottawa Committee dealing with the question of a national flower, I have my personal opinion as to a flower we should adopt.

I am not saying anything about that at the present moment. It is not so much a question of a decision of the numbers of flowers that have been suggested as of creating a sentiment in favor of a national flower. Shall we have a national flower or not? Incidentally this question affects horticulture in a practical way in that it directs the attention of the public to flower growing, and therefore interests horticultural societies as such. But it is more than a horticultural question. It is a question of national sentiment. It is a question that affects almost every person in the country—Horticulturists perhaps from the horticultural point of view. The immediate task before Horticultural Societies particularly is to endeavor to develop a public opinion on the subject. The way to do that is to take up the question, to pass a resolution, have it published in the local paper, and to endeavor to ascertain the mind of the public on this question of a national flower. Shall we have a national flower or are the present national emblems sufficient in the opinion of the public?

Having decided that, then we want to secure the opinion of the public as to which flower shall be adopted. My suggestion is that that part of the report which asks local societies to take the question up and take some definite action upon it be taken seriously to heart by all societies. The Ottawa Society will immediately take the question up again and pass a resolution in that sense.

MR. BRCK: I did not have the opportunity of adding anything to the discussion on this question, but I want to add to it in a personal way. There is one aspect which is not personal. That is suggested in a cutting from a local paper. It says that the Minister of the Interior in France in replying to the Government said that "every honor would be done to the dead." That you see is taken care of by the National Assemblage. Now there is the question for Horticultural Societies—providing suitable emblems of affection for our dead in France.

But there is another side and a personal side that I think is very well evidenced in a letter that came to us a few days ago: "Observing that a national flower is urged for soldiers' graves I would suggest our Wild Rose so plentiful in Ontario and the Western Provinces. The brave men who fought our battles loved the Wild Rose, I am sure. Rose for England, Wild Rose for Canada. I know it is the flower my boy who is continuing the fight shall place on his eldest brother's grave who fell in the war."

You and I have friends over there who died in the war, and we want to see that suitable obsequies take place. We are discussing the obsequies of the noblest of the race, and it is fitting that we take some action so that the graves in France and Flanders shall not remain dreary-looking places but that they shall be a tie which shall bring us as brothers and sisters, to those of our beloved who have died and are buried there. We may raise memorials in our cities here, but surely it is not too much to expect that we want some token which we can send over there (as we do now in our own land on the graves of those who are buried at home), which we shall be proud to see growing there when we go over next year.

This great common grave is the grave of all countries. The grave which we are particularly interested in is that which covers the British Empire: the one we are more particularly interested in is the one which covers our own 50,000 Canadian heroes; and, the particular grave you and I are most particularly interested in is that of our own particular friends.

The Canadian Government has planted trees in Flanders, and any societies which wished to be supplied with the same seed of the trees which produced the seed for those planted in Flanders could have it in two or three years time. This

could be used to stir up sentiment and probably increase the membership in the Association to some 50,000.

MISS BLACKLOCK: We ought to deal with this matter intelligently. The Wild Rose is a very beautiful little shrub, but it is a shrub not a herbaceous plant. I suppose really it is a herbaceous plant we want, one that dies down and comes up fresh every year. I have had a very firm conviction that it is the Trillium we should choose. It is a very showy flower and will grow almost anywhere. However Mrs. White seemed to think it was necessary to have the *Canadensis*. It has the advantage of having a beautiful bunch of red berries in the fall. Now I am quite



Tree Pæony Flora.

willing to say that the *Cornus Canadensis* is equally as good as the Trillium. There is no flower that is as suitable as the Trillium, the *cornus Canadensis* and the Columbine. They are the most suitable and typical Canadian flowers that we have. I think one of the American States has already annexed the Columbine, so that rules that out. We should have a beautiful flower. The Trillium is and also the *cornus Canadensis*. The scarlet berries in the fall of the latter are very ornamental, in fact more so than when the flower is in bloom.

Of course the Lily is a beautiful flower, but I don't agree with Mr. Gilchrist that Lilies are easy flowers. My experience is that the Wood Lily would require a

certain amount of shade which perhaps the *Trillium* would not do. I think the *cornus Canadensis* would fill all the requirements of a national flower and it has the advantage that it does not need any staking to keep it up. It is not more than 6 to 8 inches high, and masses most beautifully.

MR. RYERSON asked Miss Blacklock if the *cornus Canadensis* is not particularly a flower that is a habitant of shady places.

MISS BLACKLOCK: I think not, because I have seen it grow in fence corners right out in the sunshine, and I believe it grows from coast to coast. Also another thing, the *Trillium* is a flower that is easily conventionalized, and that is a quality that is very desirable in a national flower.

MR. HUNT: I have been very much interested in all that has passed *re* the national flower to decorate our heroes' graves in Flanders and being interested in flowers as well this matter has appealed very much to me. Now I understand there has been a Committee appointed in regard to the national flower. I want to impress upon all the delegates the importance of taking up this question at some good rousing meeting when they have a good attendance of members. It is a very important thing and I don't think we should determine this very hastily. We should get the consensus of opinion from all over. There are so many points as, Mr. Buck says, to be taken into consideration, such as the adaptability of the flower. Some of the flowers that have been mentioned are a little difficult to grow and to transfer from the wild state to our gardens. We want to have these things close to our homes. Those of you who have in the past been accustomed to taking wild flowers from their wild state and trying to cultivate them in our gardens have a knowledge of what would be the best. My experience has been that it is more difficult to take a plant from its wild state and cultivate it than it is to take a cultivated plant and put it in your garden.

Moved by MR. BUCK, seconded by DR. SMITH, "That the thanks of this convention be tendered to Prof. R. B. Thompson and his committee for the work done in connection with obtaining a national flower for Canada, and this committee expresses its desire that the work be continued, and that the matter of a flower for the Province of Ontario be given immediate attention. Carried.

A DELEGATE: Prof. Thompson told me this morning that what he had done in the past in the way of research on this subject was not by any means finished. He is perfectly willing to do anything that any of the Societies pass resolutions to ask him to do.

MR. MCKAY: One great object for such a flower in my opinion would be to get something that would make it entirely national. Is there not a danger of proceeding along provincialism when we strive towards getting a flower for each province? Are we not in danger of going along provincial lines?

It was moved by REV. W. H. MADDEN, seconded by A. GILCHRIST, "That a Committee be appointed by this Association to make a selection of at least one-half dozen flowers from which a provincial flower may be selected and that a circular be printed presenting those names and reasons for their selection, also that copies of said circular be sent to all Horticultural Societies for their consideration and discussion at public meetings in each district called for this purpose." Carried.

PÆONIES.

PROF. A. P. SAUNDERS, CLINTON, N.Y.

I come to you as an ambassador of the pæony, and the American Pæony Society, to try and stir up the interest of those of you who are not yet aware of the value of the Pæony as a garden flower and to bring to the more experienced cultivators of the Pæony here what suggestions I can regarding the newer varieties, especially those that have been produced in the States and which have been shown now for a number of years in the exhibitions of the American Pæony Society.

For the experienced pæony grower we do not need to say anything in praise of our favorite flower, but for those of you who do not yet feel that the pæony is the greatest of all garden plants I want to tell you first of all that it is, and then I want to tell you why it is the ideal plant for a northern garden. There is no other plant that I know of that combines so many fine qualities as the pæony and combines them with perfect hardiness and a great enthusiasm for co-operating with the gardener to produce a beautiful effect. Who could possibly claim that the fine varieties of roses, for instance co-operate very enthusiastically with their owners? He must do all the co-operating himself. He gets gorgeous results, I admit. But the proof of the ability of the pæony to withstand natural conditions, natural disadvantages of climate, is shown in its wide dissemination as a cottage garden plant. I do not know how widely disseminated pæonies are in Ontario, but in that section of New York State where I live there is no hardy plant that is so common in cottage gardens as the pæony. It is true, most of the pæonies that you find about the farm houses are very bad ones: that is all the more reason why we should preach the doctrine of fine pæonies.

What a great thing it would be for our countryside if we could have these worthless plants discontinued, and such varieties as *Festiva Maxima*, *Joan of Arc*, or *Richardson's Perfection* introduced in their place. Those beautiful things would be an adornment everywhere of the small cottage garden.

For everyone who wants to start out to form a collection of pæonies, the first question that has to be solved—I suppose—although some of us don't devote much attention to it until it is too late—is how much money we have to spend on it. But no one need be deterred from starting a collection of fine pæonies for financial reasons. Very many people buy bad pæonies in preference to good ones. It is not hard to find people who have elaborate gardens and pay a gardener \$50 or \$80 a month and buy pæonies at a Departmental store bargain counter rather than spend a dollar or two a piece for a dozen good ones and start a collection of really fine varieties.

The first thing I would like to bring to your attention is this—if you have some old bad pæonies about your own place that you have kept around for sentiment, root them out and start anew. If your purse is limited, I can name to you half a dozen or a dozen varieties of pæonies that can be bought for from 50 cents to \$1 a piece, some of them among the very finest things we have.

The American Pæony Society made an effort last fall to compile a list of the best varieties by a new method. We have something like 2,000 varieties all told. That is much too many. A great many of them are worthless and should be thrown out of cultivation altogether. That is one thing that we wish to effect. We want to get up a black list of pæonies, to discourage anyone from buying them; for if nobody buys them, the nurserymen will discontinue them in time. Then, on the other hand, we want to construct a list which will be placed at the forefront of

any pæony list. In order to accomplish this, we printed a list of all the standard varieties of pæonies. It is quite a long list and includes a lot of pæonies that are not much grown. That list was sent out to members, with a request that each man should grade from 0 to ten, whatever varieties he was familiar with. Ten was perfection; 8 or 9 good, anything below 5 was not considered at all. Returns are in and I am having them tabulated and will soon have them in print.

The results of the voting were—3 pæonies graded up to 9-7/10 on the basis of from 25 to 30 votes. Those three are:—

Therese, a wonderful light pink variety that was introduced by Dessert about fifteen years ago, the one in my opinion that is indispensable in every collection. There are not many of them that you need to say that about. In a good many cases if you do not feel like spending 25 dollars for a pæony, you can get one for \$1 that is almost as good. *Therese*, however, costs \$5 or \$6, but it is not replaceable by any cheaper kind. The other two at a grade of 9-7 are *Le Cygne*, and *Solange*, both Lemoine varieties. Then we don't find anything on 9-6. There is nothing beyond 9-7.

The next one is very interesting to see, and is one of the American varieties of recent introduction—Elizabeth Barrett Browning, one of Brand's pæonies. He has his gardens in Faribault, Minn., where he has accumulated a large collection. Brand has an abundance of acreage and apparently all the help he needs. He was at our show in Cleveland last spring. He is an attractive, unassuming enthusiastic fellow, as all pæony men are. Brand has selected out of his enormous number of seedlings in the course of eight or ten years about two dozen varieties, some of which I think are of very high quality. Elizabeth Barrett Browning is one of the best of them and grades 9-5. Here we come to a peculiarity in the method of reaching conclusions. The pæony is, of course, a flower that impresses different individuals differently. And if you wish to come as near as you can to the truth, you must have a large number of votes in order to eliminate the cranks and also in order to eliminate those cases where a grower may have a pæony that is not true to name. That, unfortunately, happens. Nurserymen are human beings and make mistakes. And sometimes the long rows of pæonies in a nursery will get somewhat mixed. So that if you send out a list of pæonies and get 30 or 40 votes, the chances are that there will be one or two of them that will be based on a plant that is not true to name. And it takes a lot of votes to eliminate the effect of one or two eccentric ones. Therefore, I don't set a great deal of store on averages unless made up of about fifteen votes. This one for Elizabeth Barrett Browning is made up of seven votes, so that I should think her position is a little questionable still.

At 9-4 we have a group of 3 magnificent pæonies—Kelway's Glorious—I am inclined to think is the finest white pæony we have to-day excepting *Le Cygne*.

Madame Jules Dessert, a magnificent beauty; and *Tourangelle*, another of Dessert's novelties. *Tourangelle* is a light pink, a very beautiful regularly formed flower. It was shown in Philadelphia three years ago in beautiful form. At a grade of 9-3 we encounter our first dark red pæony, Philippe Rivoire. It is somewhat too purple for a great many people but a good color, as it was shown at Cleveland last year. Next to that one of the oldest pæonies, *Festiva Maxima*—ranking up to these and to be had for 50 to 75 cents each. Next to that the notorious *Lady Alexandra Duff*, about which I could talk to you at some length. It has had a strange history. There are a few growers in the States who have it for sale for a consideration: I don't know about the Canadian nurserymen at all, but I presume that some of the growers over here have it. It is the most difficult pæony to-day

to get true to name. Then come La France, a very beautiful sort, of an apple-blossom pink color.

In the next group at an average of 9-2 and you see we are very high up still, 9-2 means practically all the votes at either 9 or 10—we have Mrs. Pleas' Jubilee. This is an American variety. By the way, I have told you what I think about Mr. Brand, but I have not yet mentioned some of the other of Brand's pæonies which are very well worth your consideration. Mr. Brand is very fond evidently of dark reds, and has introduced three or four pæonies in dark red shades that are very good, particularly Longfellow and Mary Brand. Any of you who are interested in Mr. Brand's pæonies, might do well to write to him for a list. Longfellow and Mary Brand in dark red; Elizabeth Barrett Browning and Frances Willard in white, are all of the very highest quality.



Herbaceous Pæony, La Rosière.

I consider Mrs. Pleas' Jubilee a very fine pæony. But they tell me it has a weak neck. It was shown in Philadelphia two years ago, and as there staged was very lovely in quality. Here also we find Sara Bernhardt, one of the most popular of the newer Lemoine varieties with the commercial growers. Also we find Walter Faxon, one of Richardson's seedlings. Richardson lived near Boston in the 60's and 70's and later. His history shows up what anyone of us might do. He had a few of the standard pæonies of good quality, the best that were in existence in the 60's, and of those he saved the seed. I do not think he can have raised more than about 100 or 200 seedlings each year, and yet of the things that Richardson left us when he died, there are three varieties which I think are as good as the very best we have to-day, namely Milton Hill, Grandiflora and Walter Faxon. Of these I should always put first the one that I had most recently seen. Grandiflora

is an extra late flat bloom, huge in size, delicious in perfume and a great bloomer. It is certainly the finest of all the late light pinks I know. Milton Hill has an extraordinary fragrance. It is late in the season, a delightful color, a slightly mauvish shell pink, but it is an extraordinary and beautiful color. Mr. Farr showed a bloom of Milton Hill at the Pæony Show in Cleveland that would have driven any sane person crazy. Fortunately there was no one there of that description as they were all pæony men.

At this level we encounter another Lemoine variety that I recommend to you particularly—that is *La Fée*, a magnificent bloom. And here we come to our friend Monsieur Jules Elie which you can get for 75 cents or \$1. Three or four years ago at our Exhibition in Boston in the class for the finest individual bloom there was a bloom staged of Jules Elie—I don't know how to tell you how big it was; I never saw a flower so big, it was an incredible bloom.

A MEMBER: How about the stem?

PROF. SAUNDERS: What sort of stem would you need considering that the plant is a tall grower and that the stem has to support a bloom which when dry might perhaps weigh one pound and when wet about two or three pounds? Of course it would be very desirable if we could have stems that would hold our pæonies up in spite of all the weather conditions; but after all, if you think what that would mean with the largest flower and tallest bloom, you would need a stem as thick as my thumb! So I am inclined to think the best we can do is to tie our stems. Take a bloom like *Sara Bernhardt* or *Le Cygne*—the stem would have to be exaggerated to bear those up under all conditions of weather.

At 9-2 is another variety, *Martha Bulloch*. It is good of course; it is fine; very large and the color is, I think you would say, good. I do not know why the flower does not appeal to me more than it does, but it seems to me to lack charm a little bit. And at this level there appears a variety that interests me very much, *Mary Woodbury Shaylor*. Those of you whose meemories go back twenty years will remember the earlier days of pæony culture in this country, when we did not have such big catalogues or long lists of foreign varieties. It was very much harder to get European sorts in those days, and Mr. Shaylor who was then at Wellesley Hills was a pioneer in importing the best European sorts. Now Mr. Shaylor has become interested in raising seedlings of his own, and several of them are varieties of high quality, and here we find *Mary Woodbury Shaylor* in the same category with *Sara Bernhardt* and *Jules Elie*.

At 9-1 we find three Lemoine varieties—*La Lorraine*, *Madame Emile Lemoine*, and *Mignon*.

And at 9 we have another of Mde. Pleas' varieties, *Elwood Pleas*. Then *Frances Willard*, another of the Brand varieties, and *Marie Crousse*, a grand pæony in a shade of almost salmon pink. And here we come to the wonderful *Richardson* variety—*Milton Hill*.

That gives you all the pæonies at 9 and above in that symposium.

Now I know that you feel resentful that certain pæonies are not there—*Primevère* for instance which I marked at 10. It is sometimes called the yellowest pæony we have, and it is one of the yellowest of the cream colored pæonies. But the plant has a beautiful habit of bloom and a most intoxicating fragrance. And I can sit down beside a bush of *Primevère* and have a very good time for an hour on a June morning hybridizing and enjoying the delicious fragrance. *Eugene Verdier* and *Eugenie Verdier*, for instance, also are not there. But we will have another of these elections in a year or two and some of our favorites may do better then.

Now regarding the price of pæonies: Here is a list that I drew up quite a time ago "Pæonies for a Modest Purse." It included Duchesse de Nemours, which is certainly one of the finest whites we have to-day in spite of all the novelties: also Festiva Maxima and Marie Lemoine. These are pæonies for 50 cents or 75 cents. If you are going to buy pæonies for little money you must be very careful what you buy. It is a great deal easier to make mistakes at 50 cents or \$1 than it is to at \$5 or \$10, because at \$5 or \$10 they are nearly all novelties that are in great demand, and they are in great demand because they are fine; while the cheaper are nearly all old sorts and the bulk of those old sorts are bad, and ought to be thrown away.

Philomèle is a great favorite of mine. It is a lovely plant in the garden. No one can go by it without smiling. It is very highly fragrant, of very good habit, and altogether a good garden plant.

Then Mademoiselle Leonie Calot, and Jean d'Arc, which is I think to-day unbeaten. I had a letter from one of our members in connection with this voting business, and he said, "I can't understand why people don't rank Jean d'Arc at the top."

In order to pick out this list I took a standard catalogue and picked out the best 50 or 75 cent ones, and I will confess to you that it was not easy to find half a dozen of them. When you get up to the \$1 a piece it is easier.

Richardson's Grandiflora for one. For another Carnea Elegans, the one originated by Calot: but this must be cut just as the petals are opening and brought into the house, the blooms are spoiled by sunlight. Then, Eugene Verdier. But since I made this list I have come to know the sister variety, Eugénie Verdier, and I have come to prefer her of the two. When you buy Eugene Verdier you may have good luck or bad luck. If you have good luck you will get the good variety. If you have bad luck you will get a variety which we have all agreed on the other side to call "L'Indispensable." That variety came over to America from Holland some years ago, and got into the trade as Eugene Verdier, and some dealers still persist in calling it Eugene Verdier. We had to do something about it, so we decided that this plant should be L'Indispensable and that the other should be Eugene Verdier because it agreed with the originator's description. The true Eugene is rather a dwarf grower and the bloom has a good deal of yellow in it. It is almost white, but there are touches of yellow in it. The other flower grows quite tall and is distinguished by a bad distinction—by the fact that almost all the buds split on the side. Then I would put in here a grand variety, and that is Madame Emile Gallé.

A MEMBER: What is the best way of fertilizing?

PROF. SAUNDERS: The best way is to dig a large hole when you put the plant in and get some well-rotted manure and mix it up in the bottom of the soil so that there will be a supply which will keep the plant going for ten or fifteen years. For top fertilizer year by year, I think that crushed bone-meal is good.

Q.:—With your knowledge of pæonies, if you were starting a collection, would you confine the number to 100 or would you go below or above?

A.:—In my collection, I have rather a limited space. I do not want to use my half-acre all for pæonies. I try to keep my collection down to 200 by throwing away, roughly, as many as I buy. Those of you who have grown pæonies for years know that it takes a considerable exercise of will to take out a great big pæony plant and throw it away, but if you say to yourself, I am getting half a dozen varieties, I must get rid of four or five of my old ones, you go around and find which ones it is easiest to discontinue. Now I am speaking as an amateur. If we have 150

varieties of pæonies, we have probably got everything we need, and if you will sit down some time and try to name the best 100 pæonies you will find it is quite easy to name 50 or 75, but the last 25 are hard to select if you are determined to name only first rate ones.

MR. SIMPSON: I was very much interested in the list to which Mr. Saunders referred. I assume that this list is identical with the one published under the name of Mr. Saunders in the *Garden Magazine* some time ago. Might I suggest as Mr. Saunders has not included that old list in his speech, that it be included in the record as I presume that every gardener would be glad of it.

LIST OF PÆONIES REGARDLESS OF PRICE OR ANYTHING ELSE
EXCEPT QUALITY.

Therese.
Le Cygne.
Madame Emile Galle.
Albatre or Avalanche.
Marie Crousse.
Grandiflora.
James Kelway.
Venus.
Duchesse de Nemours.
Jeanne d'Arc.
Philomele.
Marie Lemoine.
Eugene Verdier.

Madame Boulanger.
Baroness Schroeder.
Mlle. Leonine Calot.
Milton Hill.
Carnea Elegans.

To these I would like to add:

Eugenie Verdier.
Rosa Bonheur.
Kelways's Gloria.
Kelway's Queen.
La Fee.
Frances Willard, and perhaps two or
three others of Mr. Brandt's.

THE EVOLUTION OF THE COMMERCIAL GREENHOUSE IN RELATION
TO HORTICULTURE PAST AND PRESENT.

W. R. COBB, NEW YORK.

When one passes through the country to-day and sees the number of up-to-date greenhouses, ranging from 30 feet to 85 feet in width and from 200 feet to 600 feet long it is hard to realize that only thirty-five years ago a greenhouse wider than 20 feet was almost unheard of and hard to find.

The first greenhouses were constructed of sash similar to those used on cold frames. First came the lean-to built against a wall or building, then the full span about 10 feet wide. These were heated with brick flues connected to a hot air furnace through which the hot air was carried. The walk levels and walls were below grade so as to have as little surface exposed to the outside air as possible. There was a centre walk through which one was able to pass by keeping the head well down.

The introduction of hot water and steam as mediums to heat greenhouses made wider and longer structures possible. From this time a slow but steady growth in size and construction began. Roofs built of separate sash disappeared, and the modern method of constructing the roof as one big sash was adopted, the houses were built on the same level as the ground, sides made higher, and separate sash arranged to properly ventilate the houses placed at the ridge. The houses were constructed entirely of wood on locust or cedar posts placed in the ground 3 ft. and extending 4 ft. above, and the sides covered with boards from grade to eaves. Next the sides were made higher and glass introduced.

At this time steel was being used in the building of greenhouses on private estates. At first this construction was too expensive for florists to consider, but

as lumber advanced in price and steel decreased, it became possible for florists to use some steel in the construction of their houses. This resulted in what is known as pipe frame or semi-steel construction and houses as wide as 30 ft. became common. As time went the steel rafter construction began to be built, the widths increased to 50 ft. and 60 ft. To-day houses 85 ft. wide have been constructed. I will not go into the construction, but summing up the features that have contributed largely to the improvement and expansion of Horticulture and Vegetable growing we have:

Increase in width and length.

Increase in height of sides.

Increase in width of glass.

Decrease in size of members.

Better ventilation.

Lapping the glass instead of butting.

Introduction of hot water and steam as heating medium.

Better planning.

Increasing the width and length makes it possible to cover more ground at less cost. The sides of a greenhouse cost the same whether the house is 20 ft. or 80 ft. wide, and are the most costly part of the structure. The roof is the less costly, and by increasing the span of same the cost per square foot of ground covered decreases. As the length of the houses increases so does the cost up to a certain point. In wider houses a larger volume of air is enclosed, consequently the number of feet of radiation required is less than in narrow houses. The abandoning of the ridge and furrow type of house and the building of separate houses has been beneficial. In separated houses there are no pockets for snow, consequently more light, no labor required to keep the pockets clear of snow, etc., no gutter to leak and drip.

By increasing the height of the sides (the standard is now 7 ft.) it is possible to have a serviceable walk next to the sides thus moving the plants away from the cold sides of the structures.

The plants being a goodly distance from the glass grow and thrive in an even temperature.

Increasing the width of the glass admits more light. First 6 in., then 8 in., 10 in., 12 in., 14 in., 16 in., have come into use and in some cases 20 in. and 24 in. The 16 in. has been generally adopted as being the most economical and practical size and the length 24 in.

By the use of steel in construction, the framework can be so designed that the entire weight will be sustained by same, allowing the reduction of the wood members to a point where they serve simply as a secure setting for the glass and a house which is practically a bit of enclosed out-of-doors is secured.

Building houses with continuous lines of ventilating sash at the ridge in runs of 50 to 75 feet, placing ventilating sash on the sides and operating these sash with improved ventilating machinery gives perfect control of ventilation all through the year. It has been hard to convince some growers that side ventilation is necessary but once tried it will never be abandoned.

Lapping the glass in the roof instead of butting it has resulted in a decrease in loss of heat, draughts and a tighter roof in every respect.

By using steam or hot water, houses of any width, length and number are possible. Circulation by gravity has its limitations but by installing pumps (as many large establishments have) there is hardly any limit as to what can be

done. One range I have in mind consists of 10 houses 80 ft. by 600 ft. which are successfully heated from a central heating plant.

Few realize what an important part the planning plays in the economical building and maintaining of a greenhouse plant. No matter how small a beginning you make, start with a definite plan for future growth. Lay out your plans for as an extensive a plant as you have aspirations for, build as little of it as



Japanese Tree Pæony Selrin.

you are able, but build that little as part of a unit and you will never regret it. Before you build visit every establishment you can, consult with expert greenhouse builders, inform yourself in every way possible, make up your mind what you want and have it done.

During the past 15 or 20 years I have done considerable travelling. During this time I have seen the florists and vegetable industries emerge from rather indifferent ones into the great growing, going class. Where formerly bankers and investors could not be induced to listen to appeals for capital and help they are now sitting up and taking notice. That formerly they fought shy I do not wonder. Most of the establishments were a collection of small narrow houses of

all kinds and varieties, wandering off in all directions, ill kept, on different levels, with many and separated heating plants, and the whole offering as far as appearance and arrangement was concerned little to attract or induce one to lend or invest any money in them. Many times I have visited florists who asked for credit and in most cases the final decision has been greatly influenced by the degree of neatness around and through the greenhouses.

As the florists and vegetable growers began to build better houses they began to raise better and more abundant crops; as communities began to prosper the demand for flowers, etc., increased. The fact that passersby saw better greenhouses in use created a desire for flowers and vegetables which they did not have before. The demand has steadily increased and will, I believe, continue to increase.

Prices of everything in connection with building and maintaining greenhouses have increased, and you have increased the prices of your product. Do not try to see how much more you can increase prices but try to keep the selling price at such a level that more people will purchase, relying on economies in planning, building, growing and extensive cultivation to get and increase your profit.

On the Seabrook Farm Company at Bridgton, N.J., outside crops of all kinds are grown, and the soil is never empty except when it is frozen. There are several large greenhouses on the farm and they are never empty except for about two weeks of the year when the soil is being changed or enriched. In April cucumbers are planted and from that time to the 15th of August these crops ripen and mature. They pick from the middle of May up to August 15th. By the last of the month the houses are again planted with cucumbers which crop bears from October to Christmas. Then three crops of radishes are sown and picked, these requiring not over 45 deg. of heat. A crop requiring little heat and consequently little coal, can be profitably raised during the coldest months. In other houses tomatoes are grown. By intensive cultivation, eliminating all waste as to space, labor, etc., an industry has been founded on the strength of which the growers can go to bankers and investors when money is needed for further expansion and be received and received with joy and pleasure.

Many florists are adding nurseries to their greenhouse business. This allows them to keep the same men employed summer and winter.

I have endeavored to show you how the evolution of the commercial greenhouse has made it possible to grow better stock, increase the volume and variety of bloom, reducing the cost of operating per square foot of bench. I could produce a mass of facts and figures to prove this, but in the limited time at my disposal this is impossible.

TREES AND SHRUBS FOR SMALL PARKS.

ARTHUR H. SHARPE, LANDSCAPE ENGINEER, TORONTO.

The trees and shrubs which may be used in the planting of small parks are not limited by our title. They may be restricted by the individual park site through the influences of soil, climate and design but not by the area. The plant material which is adapted to large parks is also adapted to small ones. There is this difference, however, the small park entails concentration of treatment with important attention to details. The planting instead of extensive becomes intensive. In places of expansive vistas where the masses blend naturally

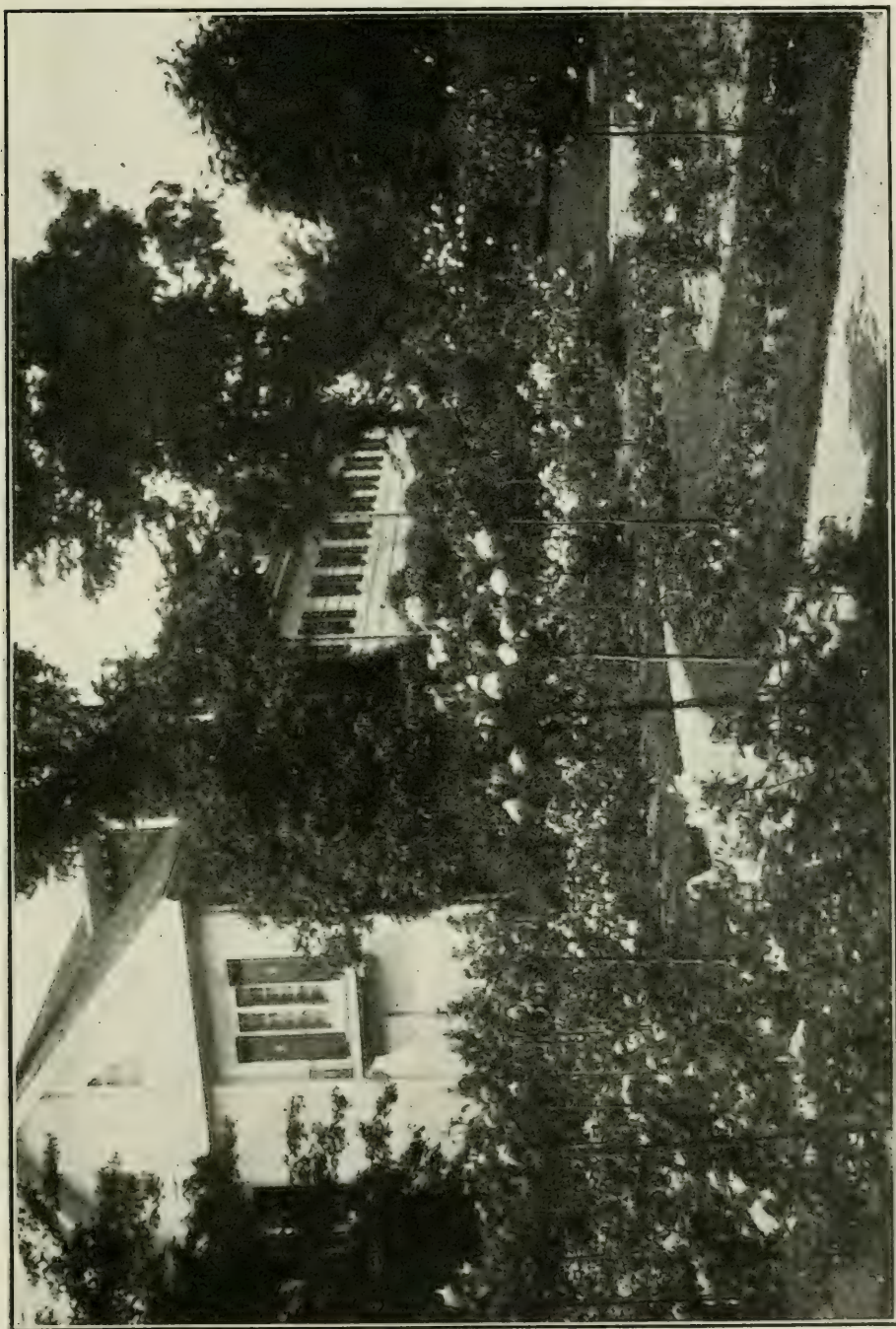
under the vision, the planting is viewed close up, and the contrasts become more vivid and harmony in the artificial arrangement should be most carefully studied. This is the sole limitation of the word "small" in our title and it is well to express this clearly. The planting of small parks requires the most thorough attention to details that the results of harmony and contrasts may be satisfactory under the intimate regard at close range.

By the term "small parks" reference is made to areas of ten acres or under. Under this classification we may include the grounds of institutions, grounds of a memorial nature, grounds devoted to athletics, grounds with a community association commonly called "neighborhood parks." With all these purposes as justification of existence it may be easily recognized that there must be a diversified arrangement of the planting if the utilitarian side of each is to be well developed. We can easily see that the planting of a playground must be so arranged that there is sufficient open space for athletic exercises and differs widely from the planting of a purely athletic area where the massing of material is the important consideration.

Every park must have a definite use which is its justification for existence. The lessons of the heroic four years just closing have been many, but to my mind the greatest has been the lesson of service. The unnecessary things of parasitical pre-war days were torn from us by the God of War and the redeeming angel of necessity stripped each of us of the stifling mantle of indulgencies. Everything and everyone had to justify an existence or migrate to the land where cooking is the common occupation and the electric range is unknown. Even the esteemed gentleman of every community who could flash a bank roll and own to no particular employment came into his own through the famous order-in-council, which elevated him to the peerage of "gentleman hobo" and he was told that he must do one of three things, work, fight or decorate the interior of a Government building where the more fastidious members of his class have been wont to sojourn. That parks have a useful place in a community has again been evidenced by an incident in this city during a time when each utility was under the acid test. Last year the hospital commission found that the accommodation for returning soldiers was inadequate and with the uncharacteristic energy of such commissions stirred this renowned city of passive endurance from the Humber to the Don by a demand for the right to erect a hospital in High Park. The request had been made to our municipal fathers and the petition partly granted before the citizens were aware of the procedure, but, when they awakened to the fact that this beautiful area was to be despoiled by the erection of buildings a mighty roar of protest burst from the throats of a people whose hands had hastened to pour money in millions for the support of the fighters. Think of it. A city which had covered itself with a mantle of fame by its generosity to the soldiers, revolting at an attempt to use a park for a hospital site. That park had a use and so well did it serve its purpose of health building to the citizens of Toronto that they were unwilling to forego its benefits even for a short period.

I am going to develop this thought one step further because there are many communities even to-day that are neglecting to provide parks space for want of a recognition of the use such areas are to a community.

Mr. Geo. E. Kessler, of Kansas City, recently investigated the advantages of park areas, and he succeeded in reducing their effects to a dollars and cents value. He is able to show that a park has an earning power in money to the community. He took land values, in his city, of districts before and after areas



Rose Garden, Emmisclare.

devoted to parks were developed, and in every case he found that value showed a material increase through the installation of parks. That meant that people were willing to pay more for their homes, and also to pay a yearly sum through taxes, if they could have their homes in a district served by a park.

Should a further comment upon the monetary value of parks be necessary to convince the gathering that every community here represented should have a well organized plan of development under way, I would refer you to the commercializing of parks as assets in real estate development. Not only in Canada, but the garden cities of the Old Country, the modern town of the United States, in fact, the re-building plans of the devastated areas of Western Europe, all contain provision for parks. I might say more emphatically, their absolute foundation is raised upon parks. It is remarkable now to find that any plan of real estate development does not contain certain areas devoted to park space. These operators are the keenest financial men of the day and the fact that they are setting aside parts of their lands to serve as parks is one of the strangest testimonials to the monetary value of such lands.

With the recognition of a useful purpose in park areas comes the responsibility to have areas fulfil that purpose in the greatest degree of efficiency. The land should be chosen for a definite purpose, this purpose should be kept in mind by the designer, and the community should protect the accepted purpose after the development work is completed. A small park should have a single purpose, a large park may have segregated areas devoted to a single purpose.

Decide what purpose your park is to serve in the community, design the area to fulfil that purpose efficiently, and protect that purpose that its use may be lasting.

With the purpose of the park ascertained it is possible to so locate the planting that the trees and shrubs will make the park serve its purpose. This may be best illustrated by the grounds of institutions. Here the "motif" of the parks is—a proper setting for the buildings. One of the strongest rules of this type of planting is to arrange the material around the base of the building so that the angle formed by the vertical lines of the walls with the horizontal lines of the lawns may be obliterated and the building blended with the grounds surrounding it. We see many buildings standing stern and harsh upon a bit of well graded lawn as if they had arrived at that location via the R. A. F. transportation system. The problem here is a simple one, and can be easily handled by the massing of shrubs near the base of the building.

This location of planting for special purpose is well represented by a problem presented to me a few years ago. I was called in by the Ontario Commission on Penal Institutions to provide a design for the Guelph Farm. The planting was of a single anaesthetic purpose, but was complicated by the distinctive nature of the grounds. The masses of planting must be so arranged that the observation from the guard towers would be unobstructed. We accomplished this by studying the vista and contour lines for location, and, by the supplementary method of raising the mass above the ground by long stemmed material so that the ground was visible underneath.

You may have noted that the remarks so far refer to the informal type of planting, but we often find that our grounds require an elaborate treatment, and have to produce a formal design. Here the structure of design is absolutely a matter of location. The first consideration of the planting of any parks is the location of the material, but as has already been emphasized, in a small park

this matter of design becomes magnified, as if under a microscope, and the details require the most intimate study to secure satisfactory results.

You may have received the impression that the planting of parks has, usually, been wrong from beginning to end. We must get our structure right or the decoration, however skilfully done, will be a failure. We often use shrub as "camouflage," if I may be pardoned from employing a word already fatigued from overwork. Unsightly places are screened by shrubs, which alleviate the conditions somewhat, when the proper way would be to remove the eyesore bodily. Planting may cover a multitude of sins, but a better physical condition would result if the sin was removed and trees and shrubs added to glorify the place.

Our subject is "Trees and Shrubs," and an obligation is implied to consider them in their relation to small parks. It is the plant material which we are to discuss. Of the vast list of plants which may be grown in our Dominion every designer may make his choice. The basis of selection is founded upon an analysis of each plant which reveals its characteristics. I find it convenient in preparing a planting plan to have a table before me, showing, first, the Latin name, second, the common name, third, the mature height, fourth, the season of flower, fifth, the color of flower, sixth, the characteristics of foliage, seventh, the soil preference, eighth, the habits of growth. This classification is again divided into three groups, 1st, plants adapted to formal design, 2nd, plants adapted to informal design, 3rd, plants adapted to naturalistic design.

With such a carefully prepared list one can make safe and rapid progress in the composition of a planting scheme.

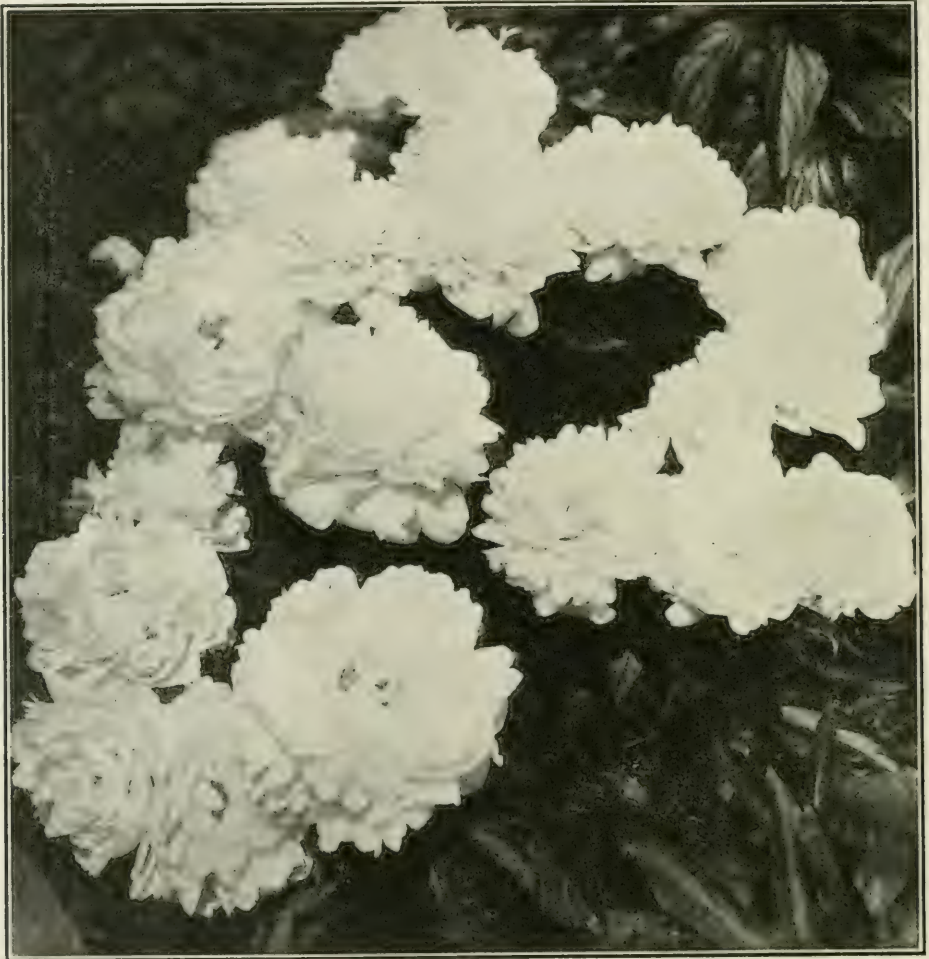
For instance, in a formal design the structure depends upon straight lines and radial curves. Certain plants lend themselves especially to this type of planting, among which we note especially the evergreens. The design is heavy, stiff, and very exact, and it will be readily seen that the conifers bear these characteristics in a marked degree over the deciduous trees. The Irish Juniper (*Juniperus Communis Hibernica*) could never be made to harmonize with the flowing lines of the *Spiraea Thunbergia*. The Lombardy Poplar (*Populus nigra fastigiata*) is one of the deciduous trees which is extensively used in the formal design and is especially adapted to the grounds of buildings of purely classical architecture. I must confess that I have a very great regard for the informal design and also the natural, and use the formal only under the pressure of architectural conditions. Generally speaking I believe that the informal is more adapted to our national life, which is void of the pomp and elaboration of Eastern Europe. While I design a formal garden I cannot help wondering how long the owner will be able to exist without bending his spine and thereby violating the spirit of my beautiful composition. Most of us are quite familiar from the newsprint views now being published, of the palace of Henry 14th, at Versailles, the present sitting of the Peace Conference. You noted the elaborate building and the ultra formal design of the grounds. Nowhere on this good old earth is such a grand and lavish display of formality fitted to be the scene of the great assembly which it now holds.

It was a distinct relief to me when Versailles was chosen, for I knew that in such a setting the backbones of our representatives would not bend, and the terms to the conquered would be as stiff as the atmosphere of the place.

However, planting trees in parks and planting civilization in Germany are not especially related, though the success of each may be largely a matter of soil.

The informal design is characterized by graceful curves and undulating surfaces. There is a certain trimness to this style, with ease replacing the stiffness of the formal. The horticultural varieties of trees and shrubs are especially adapted

to the informal planting. The plants are arranged in masses with flowing, horizontal and vertical curves. Harmony of juxta position becomes of great importance, and the classification above alluded to is necessary in its several subdivisions. To illustrate: We may have an interior of a mass composed of eight to twelve feet shrubs of medium size leaf. Usually such shrubs are not clothed to the ground and it becomes necessary to face the mass with smaller growing shrubs and a fine leaf is chosen. Again these secondary shrubs are often faced



Seedling Tapis Blanc.

with a low growing sort of very fine leaf. This carries the face of your mass in a sweeping line which blends well in the lawn. *Berberis thunbergia* has been used extensively for a facing shrubs, as also, *Kerria japonica*, and the smaller growing white flowered *Spiraea*. A good result is always secured by carrying the same facing shrub around the entire mass, which unifies the whole and creates a harmony. Simplicity of planting should be sought, the tendency is to use too many varieties in a single mass; six to eight, or even less, secure better results. As grace of form and beauty of color are the results sought in the informal com-

position, the stock usually found in a well equipped commercial nursery is adapted to the purpose as these plants have been selected for these two features. This is the type of design especially suited to the average small park.

We now come to the last and most interesting of these types of design usually found in this country. It is at once the most prevalent, the least understood and the most abused. I refer to the designs of nature or the naturalistic style. Every community has its naturalistic parks, it may be the undisturbed woodland where youthful Canada is daily re-enacting the battles of Vimy Ridge, Ypres, and Passchendaele, undisturbed, as the municipally owned ravines made accessible by attractive motor roads and trails. These are characteristic and distinctive spots in every community which should be acquired by the municipality and preserved undefiled for succeeding generations of citizens. High Park referred to earlier is a fine example of such land and, indeed, had its origin in the Will of the founder to preserve a truly natural bit of scenery for the future generations of this city. The great problem in designing these areas is to make them accessible without destroying their natural scenery. We are often called upon to go further than this and besides opening them up to service, restore the natural scenery and enhance the beauty. The City of New York owes its origin to a deposit of stone. In the early days of its history a stone quarry was opened and the small cluster of workmen's houses grew to the dignity of a town. The quarry had long since been abandoned, but the progressive citizens recognized the spot as typifying the spirit of the founders, and resolved to make it of greatest influence. A landscape architect was engaged. Under his guidance the rough hole was made accessible by steps and the rugged character of the walls were made beautiful by native shrubs and wild flowers, though the treatment would lead no one to misinterpret the origin of the place.

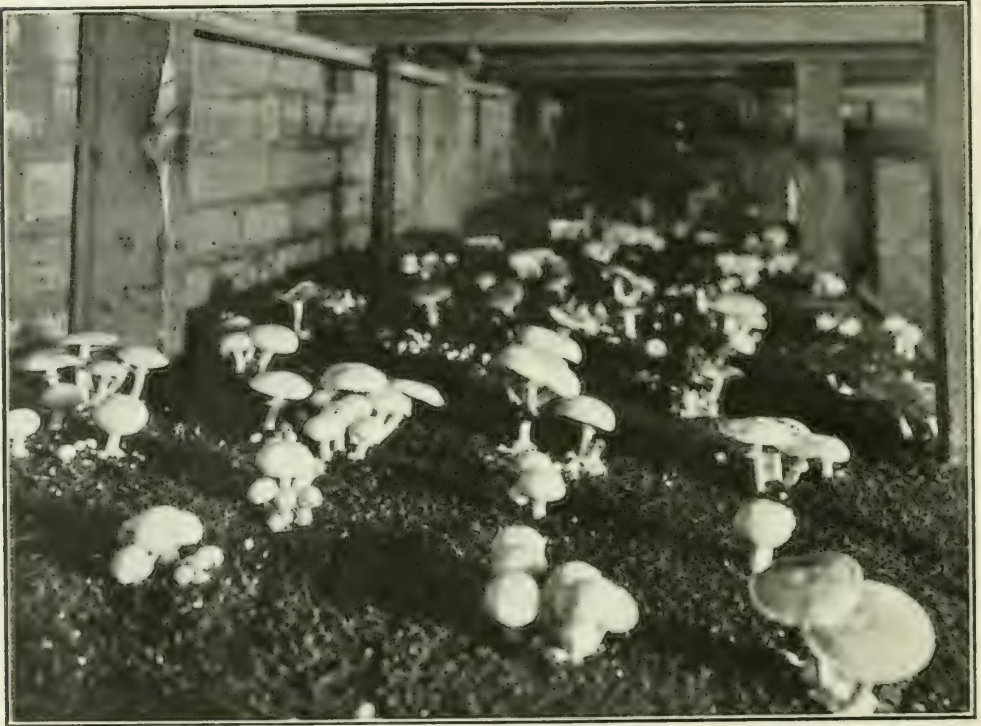
Just before the war I was commissioned to report on a park at Port Arthur. A new reservoir had been constructed and the shores of the flooded area for a certain distance had been given to the municipality for park purposes. I was on the ground shortly after the land had been formally deeded to the newcomers, but alas, not soon enough. What was my dismay, when, on that first day, as I tramped around the lake, I found that the actual devastation of war had preceded me. A large gang of men had set upon the place and hacked and tore away the greatest assets of the site, destroyed every tree and shrub which was capable of making the place attractive. My indignation at such utter block headedness, was uncontrollable, and the report which I issued at that time will never be included in the literature selected for shell shock cases.

The plant material suited to the natural style is to be found upon the grounds to be so designed. If additions are to be made to the natural forestation, the material should be collected locally. A *catalpa bignonioides nana*, more frequently called the "bungeana" is as out of the place in this planting as the *Spiraea van Houttei*. Very few of our horticultural varieties can find a place, and these are confined to the varieties nursery grown, but of local habitat. Even though the natural woodland may seem easy to imitate I assure you, after years of practice, I approach this type of design with the most thorough study, and feel that success may be attained only by the greatest effort. It is very difficult to design really natural scenery which, when completed, will not fall into the same fraternal organization with the stuffed duck in the china closet. In determining your planting list for the natural park make a list of trees and shrubs found locally, supplemented by a list of the wild herbaceous plants. Use these plants in natural grouping and your success will be measured by your ability

to analyze nature. The results are worthy of the effort, for the natural park is truly a Canadian park, the best type yet produced.

I cannot close this paper without referring to another class of parks the grounds of which serve every community. Sooner or later each one of us is bound to have a deeply laid interest in their existence and enjoy their hospitality through an extended sojourn. I refer to the burial grounds or cemeteries.

You may seem surprised that I have seen fit to allude to these areas as parks but in truth, that is their nature. One must indeed be blessed with an elastic imagination if he would conceive of such a term covering the too frequent graveyards of our great Province where the tombstones are dusted thickly with their



Mushroom Growing at Ardworld.

weak forms pointing to every angle of the heavens like a bedraggled flock of frightened sparrows crouching to take wing and scatter to the multiple points of the horizon, that they may be no longer visible. There weeds and grasses flourish in unkempt riot, and the trees, if any exist, include only the heavy, depressing evergreens, which complete a picture of utter desolation, a disgrace to the memory of the departed and a woe to the community. Such places have no right to exist and are not included in our reference.

The modern cemetery is truly a park, with well kept laws, entrancing vistas defined by masses of beautiful shrubs and airily graceful trees, the beautiful memorials are well placed in a carefully studied setting, thus is the true memorial park, a tribute to the memory of those gone before and the pride of the community. The reconstruction of the existing cemeteries and the building of new memorial parks is a very live movement in Canada at the present time. For

the past few years I have specialized in this work, and now devote practically all my time to cemetery work. There has been more advance made in cemetery design during the past ten years than during the century preceding and we have as yet only made a beginning. The planting of the cemetery is usually of the informal design, though the architectural or formal, is frequently used in partial vistas, and in segregated areas one often finds a bit of delightful natural scenery. The same observations made upon the planting of parks are applicable here, with this exception that as the grounds are subdivided into burial space the problem of planting becomes complicated.

There is an encouraging feature of the work of cemetery improvement and that is, the cost is easily borne by the grounds. Every cemetery is capable of paying expenses and to the degree of most efficient development. The horticultural societies here represented are the proper organizations to undertake this important work of municipal improvement and each one of you should return to his community resolved to have your burial area transformed into a Memorial Park. The long list of trees and shrubs which you have waited to hear enumerated has not materialized. I believe that I have mentioned at least four individuals during the reading of this lengthy paper. I have, however, been honest with you, and instead of giving you the names of all the members of these inexhaustible families, have sought to acquaint you with the principles upon which their selection depend. There is only one way in which trees and shrubs for small parks may be determined—and that is by measuring their characteristics by the effects sought. You all know these materials in a more or less familiar way, it is the methods of using them which present your greatest problems.

The work of the Horticultural Societies of Ontario is a noble work, heroic in patriotism and right worthy in record of glorious achievement.

A new area of opportunity is just being entered upon and we rightly look to this splendid organization to lead us to a new civic advancement.

The newly appointed President then took the chair and thanked the delegates for the honor they had done him.

Moved by COL. JOHN DAVIDSON, Chatham, seconded by JOHN GLASSFORD, Chatham, that owing to pressure of time at the Convention all papers to be given must be sent to the Secretary and Editor at least two weeks previous to the holding of the Convention for the purpose of condensation. Carried.

Moved by W. B. BURGOYNE, St. Catharines, seconded by DR. A. H. SCOTT, "That this Association desiring that the graves of our Canadian heroes buried in the war cemeteries of Flanders, France and England should be appropriately and lovingly decorated with flowers and plants as though they were in our home cemeteries, memorialize the Dominion Government to set aside an endowment fund for the purpose of providing in perpetuity for this tribute to our soldiers of the affection of the people of Canada." Carried.

Moved by DR. BENNETT, seconded by MR. BURGOYNE, "That a vote of thanks be tendered to the retiring President, Mr. Dockray, for his kindness in providing refreshments both evenings after the Convention." Carried.

MR. EVANS gave notice of motion, stipulating, that if five or more Horticultural Societies were represented at the Convention from any one district, these five Societies might convene and among themselves elect their district director at the Convention.

The Secretary was requested to write to the members of every Committee advising that they are on such committees.

This Convention, which was considered the best ever held was brought to a close by the singing of the National Anthem.

ACTUAL RECEIPTS AND EXPENDITURE OF HORTICULTURAL SOCIETIES IN 1918.

Societies.	Legislative grant.	Municipal grants and donations.	Members' fees.	Gate receipts at exhibitions.	Total actual receipts.	For exhibitions.	For seeds, bulbs and plants and Civic improvement.	Lectures and periodicals.	Officers' salaries.	Total actual expenditure.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Acton	75	50	120	.....	247	.....	80	40	15	153
Agincoourt	56	.....	56	.....	112	.....	19	.....	.....	90
Alvinston	49	.....	63	.....	144	.....	134	.....	.....	145
Amherstburg	124	110	51	.....	413	.....	281	.....	25	336
Aylmer	125	.....	98	.....	547	7	405	.....	42	507
Barrie	151	.....	112	.....	269	41	208	6	65	357
Belleville	80	.....	112	.....	194	.....	143	11	25	228
Blenheim & Harwich	139	.....	38	.....	283	.....	213	13	.....	239
Bowmanville	70	.....	68	.....	139	.....	122	.....	10	139
Brampton	180	.....	154	.....	334	.....	222	61	.....	318
Brantford	545	125	345	.....	1,026	*57	330	33	300	778
Brussels	80	.....	87	.....	167	.....	131	6	10	158
Cardinal	32	.....	52	.....	134	.....	153	.....	.....	165
Carleton Place.....	176	56	165	28	545	60	243	2	50	395
Chatham	800	1,000	433	.....	2,800	.....	2,277	108	50	2,785
Chesterville .....	.....	.....	73	.....	80	.....	42	1	14	77
Clifford	229	10	85	177	705	267	.....	.....	30	819
Clinton	192	21	236	.....	449	.....	391	.....	15	425
Cobourg	49	.....	60	.....	109	.....	56	21	.....	92
Dryden	55	4	40	9	125	49	5	.....	25	161
Dundas.....	171	.....	114	8	293	153	54	38	25	318
Durham	50	.....	51	.....	122	.....	78	.....	30	124
Dutton and Dunwich	75	108	85	.....	448	6	306	.....	30	360
Elmira	74	30	69	31	214	47	81	18	10	193
Elora and Salem....	123	25	80	20	421	73	125	.....	23	330
Essex.....	99	125	121	.....	433	.....	363	37	50	491
Fergus	75	.....	85	16	177	82	18	.....	15	152
Ford City	124	.....	61	.....	222	.....	84	2	.....	120
Fort William.....	142	7	116	.....	301	81	91	18	.....	283
Galt	263	100	231	19	716	203	265	11	100	690
Goderich	115	20	129	.....	264	.....	208	2	20	275
Grimsby	47	12	75	.....	131	16	48	36	.....	124
Guelph.....	378	602	490	63	1,575	.....	270	99	.....	1,542
Haileybury	141	28	66	85	369	211	.....	.....	50	335
Hamilton	456	50	608	.....	1,262	104	552	98	130	1,085
Hanover	221	24	201	.....	512	.....	215	12	20	403
Hespeler	78	125	120	.....	259	.....	267	49	10	347
High Park.....	114	135	266	.....	573	95	36	31	28	590
Hillsburg	104	.....	14	.....	122	.....	9	.....	2	16
Ingersoll	259	50	169	.....	1,330	37	1,028	.....	.....	1,335
Kingston .....	.....	.....	8	.....	8	.....	.....	.....	.....	8
Kingsville	151	125	103	.....	751	149	502	.....	20	706
Kitchener	324	225	344	85	1,090	315	319	4	100	1,077
Lindsay	200	347	276	.....	983	75	502	133	12	761
Listowel .....	.....	.....	65	.....	86	.....	85	20	.....	114
London	436	.....	1,100	.....	1,593	.....	745	472	150	1,748
Milton	81	.....	88	.....	175	*50	49	.....	15	148
Mitchell	106	.....	123	.....	246	.....	134	46	25	264
Morrisburg	75	81	88	.....	375	61	137	.....	.....	346
Napanee.....	60	100	16	.....	248	.....	68	22	25	128
Newcastle	47	.....	78	.....	214	.....	184	.....	.....	203
Niagara Falls	75	130	234	.....	444	.....	191	83	.....	308
Orangeville	131	.....	131	.....	405	8	335	.....	15	449
Orillia	88	.....	102	.....	225	.....	172	.....	.....	186
Oshawa	100	.....	99	.....	202	.....	161	.....	10	187
Ottawa	800	576	1,300	.....	2,722	311	*142 } 1,335 }	31	150	2,485
Owen Sound.....	192	103	136	14	644	229	277	7	15	607

ACTUAL RECEIPTS AND EXPENDITURE OF HORTICULTURAL SOCIETIES
IN 1918.—Continued.

Societies.	Legislative grant.	Municipal grants and donations.	Members' fees.	Gate receipts at exhibitions.	Total actual receipts.	For exhibitions.	For seeds, bulbs and plants and Civic Improvement.	Lectures and periodicals.	Officers' salaries.	Total actual expenditure.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Paris	283	4	272	16	762	187	478	5	.....	803
Perth	196	60	176	.....	453	.....	230	29	25	415
Peterborough	265	4	256	.....	537	12	374	5	50	533
Pictou	78	50	86	.....	227	.....	138	5	20	205
Port Credit	60	8	69	.....	156	58	37	.....	.....	152
Port Dover	107	30	93	24	326	105	5	38	40	320
Port Hope	93	.....	92	.....	185	.....	73	38	10	130
Richmond Hill	76	.....	63	.....	162	90	25	.....	.....	151
St. Catharines	800	486	828	193	2,712	346	1,162	15	310	2,966
St. Thomas	800	2,230	923	.....	8,046	.....	4,651	134	600	7,984
Sandwich	415	617	176	.....	1,237	.....	952	75	.....	1,199
Seaforth	234	25	154	.....	587	7	309	6	35	452
Smith's Falls	123	247	60	12	443	57	175	.....	.....	416
South Norwich Tp. .	51	.....	51	.....	103	.....	87	.....	.....	97
Stirling	60	.....	75	.....	136	6	82	18	.....	117
Stratford	609	125	516	.....	1,369	157	719	71	50	1,091
Strathroy	198	.....	321	.....	519	17	322	26	25	448
Thornhill	115	35	50	.....	428	97	.....	.....	.....	468
Tillsonburg	234	.....	64	.....	468	37	379	36	25	499
Toronto	700	.....	557	.....	1,623	460	99	54	60	1,703
Walkerton	55	.....	63	10	131	26	25	25	22	146
Walkerville	204	.....	172	.....	489	10	237	4	75	448
Wallaceburg	130	365	150	.....	963	.....	829	.....	.....	1,046
Waterloo	81	29	89	49	264	73	*10— 77	7	40	264
Welland	75	2	97	.....	252	.....	214	.....	.....	266
Westboro	83	26	127	.....	259	78	114	.....	15	259
Weston	164	12	530	.....	741	67	477	.....	15	711
Wheatley	75	.....	83	.....	331	.....	254	.....	.....	262
Whitby	74	.....	72	.....	150	12	81	28	.....	142
Winchester	159	145	211	.....	531	11	359	.....	20	515
Windsor	636	300	460	.....	1,933	.....	990	.....	150	1,612
Woodstock	248	100	207	31	586	106	247	.....	50	497
Totals	16,663	9,504	17,033	890	55,105	4,806	29,102	2,190	3,393	53,822

* For lawns and gardens.

STATEMENT OF MEMBERSHIP AND LEGISLATIVE GRANTS FOR 1917-19.

Societies.	Expenditure in 1918, on which grant for 1919 is based.	Membership.		Legislative grants.		
		1917	1918	1917	1918	1919
	\$ c.			\$	\$	\$
Acton (organized in 1918).....	153 30	.....	120	.....	75	76
Agincourt do	89 78	.....	56	.....	56	40
Alvinston	144 62	59	63	59	49	55
Amherstburg	336 06	105	51	76	124	95
Aylmer	506 67	100	99	82	125	151
Barrie	356 71	200	112	160	151	120
Belleville	228 50	80	111	62	80	89
Blenheim & Harwich	239 00	150	99	.....	139	87
Bowmanville	139 30	85	67	49	70	54
Brampton	318 22	234	154	169	180	125
Brantford	778 46	753	345	309	545	294
Brussels	157 61	111	87	75	80	66
Cardinal	164 79	52	52	35	32	55
Carleton Place	395 10	213	165	146	176	146
Chatham	2,784 87	357	518	438	800	800
Clifford	819 42	153	141	179	229	236
Clinton	425 31	242	236	114	192	176
Cobourg	92 30	73	60	40	49	40
Dryden	160 67	50	50	40	55	.....
Dundas	318 34	109	112	113	171	111
Durham	124 39	52	51	42	50	46
Dutton and Dunwich (organized in 1918).....	359 96	.....	85	.....	75	112
Elmira	192 66	66	69	48	74	68
Elora & Salem	329 66	96	92	54	123	106
Essex	490 79	130	121	87	99	154
Fergus	151 88	80	85	42	75	62
Ford City	119 99	102	61	43	124	49
Fort William	283 31	184	139	61	142	112
Galt	690 21	218	231	195	263	235
Goderich	275 14	135	129	92	115	107
Grimsby	124 28	75	75	45	47	54
Guelph	1,542 10	330	490	158	378	517
Haileybury	334 98	90	100	88	141	111
Hamilton	1,085 12	601	608	334	456	450
Hanover	299 93	235	201	127	221	136
Hespeler	347 49	109	120	55	78	121
High Park	586 89	174	280	84	114	227
Hillsburg	15 60	60	50	77	104	21
Ingersoll	1,334 73	169	169	75	259	366
Kingston	8 35	.....	8	52	.....	.....
Kingsville	706 22	95	103	88	151	198
Kitchener	1,077 10	268	392	297	324	378
Lindsay	761 19	299	284	85	200	270
Listowel	114 00	60	65	73	.....	47
London	1,747 73	617	1,100	340	436	761
Milton	147 95	100	88	46	81	62
Mitchell	263 60	131	123	75	106	101
Morrisburg (organized in 1918)...	345 79	.....	88	.....	75	108
Napanee	127 60	53	63	54	60	51
Newcastle	203 32	69	78	36	47	72
Niagara Falls (organized in 1918)	308 26	.....	234	.....	75	149
Orangeville	449 19	96	139	111	131	149
Orillia	185 86	128	102	57	88	76
Oshawa	186 92	133	99	84	100	75
Ottawa	2,485 39	1,457	1,300	535	800	800
Owen Sound	606 89	167	171	110	192	197
Paris	802 80	300	304	189	283	284
Perth	415 28	151	176	160	196	153
Peterborough	532 58	300	268	234	265	212
Pictou	204 76	111	86	37	78	75

STATEMENT OF MEMBERSHIP AND LEGISLATIVE GRANTS FOR 1917-19.—Continued.

Societies.	Expenditure in 1918, on which grant for 1919 is based	Membership.		Legislative grants.		
		1917	1918	1917	1918	1919
	\$ c.			\$	\$	\$
Port Credit.	151 88	68	70	32	60	58
Port Dover.	319 83	92	93	62	107	104
Port Hope.	129 61	131	93	72	93	60
Richmond Hill.	150 75	74	63	60	76	56
St. Catharines.	2,965 96	824	828	713	800	800
St. Thomas.	7,984 06	765	964	800	800	800
Sandwich.	1,199 45	282	176	292	415	338
Seaforth.	451 98	220	156	143	234	156
Smith's Falls.	415 73	82	60	101	123	115
S. Norwich Tp. (organized in 1918)	96 81	.....	51	.....	51	38
Stirling.	117 02	72	75	46	60	51
Stratford.	1,091 29	669	516	344	609	420
Strathroy.	448 05	249	321	149	198	209
Thornhill.	468 12	59	50	49	115	126
Tillsonburg.	498 63	85	64	116	234	138
Toronto.	1,703 45	1,006	557	593	700	575
Walkerton.	146 07	63	63	42	55	.....
Walkerville.	447 64	183	172	184	204	161
Wallaceburg.	1,045 88	134	150	75	130	292
Waterloo.	264 00	85	89	61	81	90
Welland (organized in 1918).	265 61	.....	102	.....	75	96
Westboro.	258 92	113	127	51	83	101
Weston.	710 66	179	545	120	164	342
Wheatley (organized in 1918).	262 25	.....	83	.....	75	89
Whitby.	141 53	88	79	64	74	60
Winchester.	515 39	182	219	125	159	192
Windsor.	1,611 84	584	460	585	636	524
Woodstock.	497 41	300	207	101	248	182
New Societies						
Aurora. ....	.....	.....	.....	.....	.....	75
Bothwell. ....	.....	.....	.....	.....	.....	52
Chesterville. ....	.....	.....	.....	.....	.....	71
Fenelon Falls. ....	.....	.....	.....	.....	.....	75
Iroquois. ....	.....	.....	.....	.....	.....	75
New Hamburg. ....	.....	.....	.....	.....	.....	70
New Toronto. ....	.....	.....	.....	.....	.....	75
Russell. ....	.....	.....	.....	.....	.....	65
Warton. ....	.....	.....	.....	.....	.....	66
Totals.	53,338 74	17,156	17,558	11,496	16,668	16,885

SECRETARIES OF HORTICULTURAL SOCIETIES.

Societies.	Secretaries.	Societies.	Secretaries.
Acton	R. M. McDonald.	Milton	R. L. Hemstreet.
Agincourt	T. A. Paterson.	Mitchell	A. J. Blowes.
Alvinston	Pearson P. Winn.	Morrisburg	C. E. Cook.
Amherstburg	Rev. L. W. Reid.	Napanee	W. S. Herrington.
Aurora	D. McLeod.	Newcastle	Mrs. J. E. Matchett.
Aylmer	A. A. Learn.	New Hamburg	W. H. Umbach.
Barrie	T. T. Young.	New Toronto	C. W. Longley.
Belleville	W. J. Diamond.	Niagara Falls	G. L. Sherlock.
Blenheim & Harwich	O. F. Anderson.	Orangeville	H. F. Tuck.
Bothwell	Rev. J. Kinner.	Orillia	G. J. Overend.
Bowmanville	Mrs. E. V. Scobell.	Oshawa	Mrs. E. J. Jacobi.
Brampton	F. S. Jennings.	Ottawa	H. W. Jackson, 25 Spark St.
Brantford	Jas. L. Rowe, 15 Chestnut Ave.	Owen Sound	Miss J. S. Maughan.
Brussels	B. S. Scott.	Paris	C. R. Whitby.
Cardinal	J. F. Harries.	Perth	R. S. W. Buffam.
Carleton Place	J. R. McDiarmid.	Peterborough	E. E. Brumwell.
Chatham	Jas. Innes.	Pictou	Miss G. Hazard.
Chesterville	Miss Helen Moad.	Port Credit	A. W. Briggs.
Clifford	Jno. R. Scott.	Port Dover	W. L. Sovereign.
Clinton	H. R. Sharpe.	Port Hope	M. E. Dann.
Cobourg	C. R. Gummow.	Richmond Hill	Mrs. A. L. Phipps.
Dundas	Jas. A. Kyle.	Russell	Miss S. L. A. Lowrie.
Durham	C. Elvidge.	St. Catharines	Mrs. Pirie Blain.
Dutton & Dunwich	W. H. Cape.	St. Thomas	R. W. Johnson.
Elmira	C. W. Schierholtz.	Sandwich	A. R. Marentette.
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